NISTIR 4820

(Supersedes NISTIR 4739)

VALIDATED PRODUCTS LIST 1992 No. 2

Programming Languages
Database Language SQL
Graphics
GOSIP
POSIX
Security

Judy B. Kailey

U.S. DEPARTMENT OF COMMERCE
Technology Administration
National Institute of Standards
and Technology
Computer Systems Laboratory
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Gaithersburg, MD 20899

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U.S. DEPARTMENT OF COMMERCE
Barbara Hackman Franklin, Secretary

TECHNOLOGY ADMINISTRATION
Robert M. White, Under Secretary for Technology

NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY
John W. Lyons, Director

FOREWORD

The Validated Products List (formerly called the Validated Processor List) is a collection of registers describing implementations of Federal Information Processing Standards (FIPS) that have been validated for conformance to FIPS. The Validated Products List also contains information about the organizations, test methods and procedures that support the validation programs for the FIPS identified in this document.

The Validated Products List is updated quarterly.

TABLE OF CONTENTS

1. INTRODUCTION

1.1 Purpose

The testing of Information Technology (IT) Products to determine the degree to which they conform to specific Federal Information Processing Standards (FIPS) may be required by Government agencies as specified the Federal Information Resources Management Regulation (FIRMR) Parts 201.13 and 201.39, and the associated Federal ADP and Telecommunications Standards Index. Products having a current validation certificate or test report may be offered or delivered by vendors in response to requirements as set forth in solicitations by Federal agencies. The Validated Products List (VPL) contains conformance testing information for the following IT Standards:

Programming Languages COBOL, Fortran, Ada, Pascal, and MUMPS
Database Language SQL
Graphics
GOSIP
POSIX
Security

This List is updated and published quarterly. The information contained herein is supplied by the contributors listed in Section 2.6 and Appendix A, and is current as of the tenth of the month preceding the publication date. Copies of the VPL may be obtained from:

National Technical Information Service
U.S. Department of Commerce
5285 Port Royal Road
Springfield, VA 22151.

Subscriptions: (703) 487-4630
Individual Copies: (703) 487-4650

Ordering Number: PB92-937300

Questions or comments concerning the VPL should be directed to:

National Institute of Standards and Technology (NIST)
Computer Systems Laboratory
Software Standards Validation Group
Building 225, Room A266
Gaithersburg, MD 20899
Telephone (301) 975-3274

1.2 Document Organization

1.2.1 Programming Languages

Section 2 identifies those COBOL, Fortran, Pascal, and Ada programming language processors that have a current validation certificate referencing the applicable FIPS as of the date of this publication.

1.2.2 Database Language SQL

Section 3 identifies those SQL language processors that have a registered test report for FIPS PUB 127-1 as of the date of this publication.

1.2.3 Graphics: GKS

Section 4 lists those GKS implementations that have a current validation certificate for FIPS PUB 120.

1.2.4 Graphics: CGM

Section 5 identifies those Computer Graphics Metafiles (CGMs) that have a registered test report for FIPS PUB 128.

1.2.5 GOSIP

Section 6 contains information regarding GOSIP conformance testing registers.

1.2.6 POSIX

Section 7 identifies POSIX products that have a current validation certificate for FIPS PUB 151-1.

1.2.7 Computer Security

Section 8 contains information regarding validated products for DES and MAC.

1.2.8 FIPS Conformance Testing Products

Appendix A lists FIPS conformance testing products and services available to the public. Information for these products and services may be obtained by contacting the appropriate person listed.

2. PROGRAMMING LANGUAGES

2.1 FIPS Programming Language Standards

As specified by the FIPS, FIRMR and the associated Federal ADP and Telecommunications Standards Index, Federal agencies when acquiring language processors, must assure that processors are in accordance with the following FIPS for programming languages:

a. COBOL processors must satisfy the provisions of FIPS PUB 21-3, COBOL, and must be identified as implementing all of the language elements of at least one of the subsets of FIPS COBOL as specified in FIPS PUB 21-3.

b. BASIC processors must satisfy the provisions of FIPS PUB 68-2, BASIC.

c. Fortran processors must satisfy the provision of FIPS PUB 69-1, Fortran, and must be identified as implementing all of the language elements of the subset or full levels of FIPS Fortran as specified in FIPS PUB 69-1.

d. Pascal processors must satisfy the provisions of FIPS PUB 109, Pascal.

e. Ada processors must satisfy the provisions of FIPS PUB 119, Ada.

f. MUMPS processors must satisfy the provisions of FIPS PUB 125, MUMPS.

g. C processors must satisfy the provisions of FIPS PUB 160, C.

Copies of the above publications are for sale by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

Conformance testing programs are currently available for all above FIPS except for the programming language BASIC. A Test suite for BASIC is being developed.

2.2 Organization of Programming Language Processor Entries

The entries in the VPL for programming language processors are presented as follows:

- The VENDOR ID column contains the name of the Vendor of the processor.

- The PROCESSOR ID column contains the Processor identification and the Validation Summary Report (VSR) or certificate number. This number refers to the VSR that was produced as a result of the testing. The VSR describes the testing environment and details any processor nonconformity that was detected as a result of the testing. Information for obtaining a VSR is listed in section 2.6.

- Derived processors in the VENDOR & COMPILER column are Ada processors that have been derived from the processor/hardware/operating system environment used during the testing. In order for derived processors to be listed here, they must be properly registered with the Department of Defense, Ada Joint Program Office (AJPO) by the vendor of the processor.

- The HARDWARE & OPERATING SYSTEM column presents the hardware and operating system environment (including pertinent supporting system software) used during the

validation. In the case of Ada processors, those environments for derived processors will appear in this column.

- The EXPIRY DATE column lists the expiration date of the Certificate of Validation. A processor may be included in the List after the certificate has expired if the validation is in process. Notification must be received by NIST at least 30 days prior to publication of the List in order for such a processor to be included. In this case the expiration date will be followed by "(pending)".

- For COBOL processors, the SUBSET column cites the applicable Federal Subset. For Fortran processors, the LEVEL column specifies the applicable Federal level. For Pascal processors, the ISO 7185 Pascal Standard Level (ISO 7185 Level 0 is equivalent to FIPS 109). This designation is presented in the PROCESSOR ID column.

- The entries in the OTHER ENVIR column are other hardware and operating system environments in which the processor operates. The vendor of the processor has certified that the identified processor, when operating under the environments included in this column, produces the same test results as those obtained from the hardware and operating system environment used during the validation. Test results and other information from these environments may be required as evidence for entries to be included in this column.

- The word "Yes" in the NONCONFORMITIES column indicates that the processor did not conform to the applicable FIPS in one or more cases as evidenced by the validation. The Validation Procedures allow for certain processors to be validated with nonconformities, with the stipulation that the nonconformities are corrected and the processor is revalidated within one year. The VSR should be reviewed for details of the nonconformities.

2.3 Validation of Processors

2.3.1 Validation Requirements

In accordance with the requirements referenced in Section 1.1, processors offered to the Government for purchase, lease, or use in connection with ADP services shall be validated for conformance to FIPS for programming languages. To confirm that the specifications of the designated FIPS have been met:

a. the processor shall be tested with the Compiler Validation System (CVS) approved by NIST,

b. the processor validations shall be conducted in accordance with NIST validation procedures,

c. a Validation Summary Report (VSR) shall be produced summarizing the test results of the CVS on the designated processor for that FIPS,

d. all nonconformities noted in the VSR shall be corrected within twelve months,

e. a Certificate of Validation shall be issued if validation results warrant. In order for an Ada processor to receive a Certificate of Validation the processor must successfully pass all applicable tests of the Ada Compiler Validation Capability (ACVC) without exception.

The Federal ADP and Telecommunications Standards Index supplies standard terminology which may allow for delayed validation. When delayed validation is allowed, the offeror may meet this

requirement by showing evidence of having submitted the processor for validation. Proof of submission is in the form of a letter from NIST scheduling the validation.

Programming language processors offered to the Federal Government must comply with the applicable Government requirements. Failure to comply with these requirements shall be deemed sufficient cause to declare a bidder non-responsive or to declare a vendor in default for failure to deliver required software.

2.3.2 Placement in the List

For a processor to be placed in the List it must:

a. have been officially validated within the past twelve calendar months, and

b. have no errors remaining that were identified during a previous test.

2.3.3 Removal from the List

A processor is removed from the List when:

a. the processor is not officially tested within twelve calendar months, or

b. testing indicates that the processor still contains errors identified during a previous validation.

2.3.4 Validation Procedures

Validation procedures are published in the following documents:

Compiler Validation Procedures, dated February 1, 1990
Ada Compiler Validation Procedures and Guidelines, Version 2.1, August, 1990
Pascal Validation Policy and Procedures, Version 5.3, February 20, 1991

2.4 Certificate of Validation

A Certificate of Validation is issued for those programming language processors that have been tested and are considered to be in compliance with the FIPS as specified by the FIPS, FIRMR and the associated Federal ADP and Telecommunications Index.

The requirement for retesting may be waived and the certificate of validation extended at the option of NIST if:

a. no errors were identified during the previous testing of the processor,

b. the vendor certifies, in writing, to NIST that no changes have been made to either the processor or the supporting system software, and

c. no new version of the validation system has been officially released during the interim period.

2.5 Language Processor Validation Suites

Following are the validation suites and ordering information for testing programming language processors for conformance to FIPS.

a. Copies of the COBOL, Fortran, MUMPS, and Ada Compiler Validation Suites may be purchased from:

National Technical Information Service (NTIS)
5285 Port Royal Road
Springfield, VA 22161
Telephone (703) 487-4650 (Voice)
(703) 321-8547 (FAX)

COMPILER VALIDATION SYSTEM [MEDIUM/FORMAT]	VERSION	NTIS ACCESSION NUMBER
COBOL 85 (CCVS85)	3.1	PB91-508002
Fortran (FCVS78)	2.0	PB85-226736
Ada [Tape/Backup]	1.11	ADA212551
Ada [Tape/Tar]	1.11	ADA212437
Ada [Tape ANSI Standard]	1.11	ADA212548
Ada [Disk (MS/DOS)]	1.11	ADA212549
MUMPS [Tape/Backup]	7.61	PB91-507699
MUMPS [Tape/ANSI]	7.61	PB91-507715
MUMPS [Tape/Tar]	7.61	PB91-507723
MUMPS [Disk (MS-DOS)]	7.61	PB91-507707

b. The current version of the Pascal Validation System (PVS) is Version 5.4 and is available from:

British Standards Institution (BSI)
Software Engineering Department
BSI Quality Assurance
P. O. Box 375
Milton Keynes
MK14 6LL
ENGLAND
Telephone (011) +44-908-220908 (Voice)
(011) +44-908-220671 (FAX)

c. The current version of the ANSI C Validation Suite (ACVS[tm]) is Version 3.0 and is available from:

Perennial, Inc.
4699 Old Ironsides Drive
Suite 210
Santa Clara, CA 95054
Telephone (408) 748-2900 (Voice)

2.6 Testing Laboratories and Supporting Organizations

The organizations listed below have performed validations, supplied information, or are sources for Validation Summary Reports (VSR) for programming languages. These organizations may be contacted for validation information and for copies of VSR(s). COBOL and Fortran VSR(s) may be obtained from NIST. Pascal VSR(s) whose VSR numbers begin with "NIST" or end in "US" may also be obtained from NIST. Pascal VSR(s) whose VSR numbers end in "UK" are available from BSI. Ada VSR(s) may be obtained from the Ada Information Clearinghouse, the National Technical Information Service, or from the Ada Validation Facility (AVF) that produced the VSR. To obtain a copy of a VSR from an AVF, locate the upper case letter in the certificate number (e.g., 870608W1. . .). That letter corresponds to the letter in the CODE column to the left of the organizations listed below.

CODE	ORGANIZATION	CONTACTS	LANGUAGE
S	National Institute of Standards and Technology Software Standards Validation Group Building 225, Room A266 Gaithersburg, MD 20899 (301) 975-3274 Telex: 197674 NBS UT Telecopier: (301) 590-0932	L. Arnold Johnson Judy Kailey Woody Schneider Kathryn Miles William Dashiell Carmelo Montanez	All COBOL, Fortran BASIC, C Pascal, C Ada, MUMPS, SQL Ada, MUMPS, C GKS
N	National Computing Centre Limited (NCC) Oxford Road Manchester M1 7ED ENGLAND (011) +44 (61) 228 6333 +44 (61) 236 4715 (FAX) Telex 668962	Jane Pink Jon Leigh David Bamber	COBOL Fortran Ada GKS
	Gesellschaft für Mathematik und Datenverarbeitung mbh (GMD) Institut für Anwendungsorientierte Software-und Systemtechnik (I 8) Schloss Birlinghoven W-5205 St Augustin 1 Federal Republic of Germany (011) +49-2241-14-0 Kirsch @gmd2i.gmd.de	Berthold Kirsch	Fortran GKS
	Bureau Inter Administration de Documentation Informatique (BIADI) 21 Rue Bara 92132 Issy France	E. Bialot	COBOL Fortran
	Instituto Italiano del Marchio di Qualita (IMQ) Via Quintiliano, 43 20138 Milano Italy +39-2-5073266	Angelo Belloni	COBOL Fortran

	JMI Institute 21-25, Kinuta 1-Chome Setagaya-Ku, Tokyo 157 Japan +81 3 3416 9600	Y. Fukui	COBOL Fortran
	British Standards Institution (BSI) P.O. Box 375 Milton Keynes MK14 6LL ENGLAND (011) +44 0908-220908 Telex: 827682 BSIQAS G	John Souter	Pascal
W	Ada Validation Facility Language Control Facility ASD/SCEL Wright-Patterson AFB, OH 45433-6503 (513) 255-4472	Bobby Evans	Ada
B or A	BNI-AVF AFNOR Tour Europe, Cedex 7 92080 Paris La Defense FRANCE (011) 33-142915960 Telefac: (011) 33-142915656 Telex: AFNOR 611 974 F	Fabrice Garnier de Labareyre	Ada
I	IABG-AVF Industrieanlagen-Betriebsgesellschaft Dept. ITE Einsteinstrasse 20 D-8012 Ottobrunn Federal Republic of Germany +49-89-6088-2477 e-mail: tonndorf@ajpo.sei.cmu.edu	Michael Tonndorf	Ada
	Ada Information Clearinghouse 3D139 1211 S. Fern, C-107 The Pentagon Washington, D.C. 20301-3081 (703) 685-1477		Ada VSR(s)
	National Technical Information Service U.S. Department of Commerce 5285 Port Royal Road Springfield, VA 22161 (703) 487-4650		Ada VSR(s)

2.7 COBOL PROCESSORS

VENDOR	PROCESSOR ID & VSR #	HARDWARE & OPERATING SYSTEM	EXPIRY DATE	SUBSET	OTHER ENVIR HW/OS	NONCON-FORMITIES
Amdahl Corporation	Micro Focus COBOL/2 for Unix Version 1.2 *NIST-91/1964*	Amdahl 5990-1400 *UTS Version 2.1, Release 1*	8/1/92	High	Amdahl 73xx, 580-xxx, 58xx, 5990-xxx, 5995-xxx *UTS Version 2.1 Release 1*	Yes
Bull HN Information Systems, Inc.	COBOLM Release 2.0 *NIST-90/1321*	DPS 6000 Model 634 *GCOS6 HVS Version 2.0*	2/1/92 *(pending)*	High	DPS6/EMMU Series *GCOS6 Mod 400 Release 4.1* DPS6 PLUS Series *HVS6 PLUS Version 2.0* DPS 6000 Series *GCOS6 HVS Version 2.0*	Yes
	COBOL-85 Version 8C82.2 Update 1 *NIST-91/1681*	DPS-90 *GCOS8 Version 4020 Release 1*	6/1/92	High	DPS-9000, DPS-8000 *GCOS8 Version 4020 Release 1*	Yes
Bull/SA	COBOL/2 Release 1.2 *BIA-91/001*	DPX/2 210 *BOS Version 2.0*	7/1/92	High	DPX/2 200 Series; 300 Series *BOS Version 2.0*	Yes
Computer Associates	CA-Realia COBOL Version 4.2 Release V *NIST-92/1261*	IBM PS/2 Model 80 *OS/2 Version 1.3*	2/1/93	Intermediate	IBM PS/2 Model 55SX, 60, 70, 90, 95 *OS/2 Version 1.3* IBM PS/2 Model 55SX, 60, 70, 80, 90, 95 *OS/2 Version 1.21*	
	CA-Realia COBOL Version 4.2 Release V *NIST-92/1262*	Compaq Dexkpro 386 *MS/DOS Version 5.0*	2/1/93	Intermediate	Compaq Systempro, Deskpro 386, Portable 386, Portable III *MS-DOS Version 2.1 thru 5.0*	
Control Data Corporation	COBOL/VE Version 2.0 Release 91324 *NIST-92/1101*	CYBER 180-995 *NOS/VE Version 1.6.1 Level 780*	1/1/93	High	CYBER 180 Series; CYBER 2000 *NOS/VE Version 1.6.1 Level 780*	
	MicroFocus COBOL/2 Version 1.2 *NIST-92/1102*	Control Data 4680 MP *EP/IX Version 1.4.2*	1/1/93	High	Control Data 4000 Series *EP/IX Version 1.4.2*	Yes
Digital Equipment Corporation	VAX COBOL Version 4.4 *NIST-90/2201*	VAX 8800 *VAX/VMS Version 5.4*	11/1/92	High	VAX 6000 Mod 200, 300, 400; VAX 8200, 8250, 8300, 8350, 8500, 8530, 8550, 8600, 8650, 8700, 8800, 8810, 8820, 8830, 8840, 8842, 8974, 8978, 9000; MicroVAX II, 2000, 3100, 3300, 3400, 3500, 3600, 3800, 3900; VAXstation II, 2000, 3100, 3200, 3500, 3520, 3540, 8000; VAX-server 3100, 3300, 3400, 3500, 3600, 3602, 3800, 3900, 6000-210, 6000-310, 6000-410, 6000-420; *VAX/VMS Version 5*	

COBOL PROCESSORS *Continued*

VENDOR	PROCESSOR ID *& VSR #*	HARDWARE & *OPERATING SYSTEM*	EXPIRY DATE	SUBSET	OTHER ENVIR HW/*OS*	NONCON-FORMITIES
Hewlett-Packard Company	COBOL/HP-UX Version X.03.50 *NIST-91/1661*	HP 9000 Series 840 *HP-UX Version 7.0*	5/1/92	High	HP 9000 Series 815, 822, 825, 832, 834, 835, 842, 845, 850, 852, 855, 860, 865, 870 *HP-UX Version 7.0*	Yes
	COBOL/HP-UX Version X.03.01 *NIST-91/1662*	HP 9000 Series 370 *HP-UX Version 7.0*	5/1/92	High	HP 9000 Series 318, 319, 320, 330, 332, 340, 350, 360, 370, 375, 400, 425 *HP-UX Version 7.0*	Yes
	COBOLII/XL Version A.04.02 *NIST-91/1663*	HP3000 Series 930 *MPE XL Version A.40.00*	5/1/92	High	HP3000 Series 920, 922, 925, 932, 935, 948, 949, 950, 955, 958, 960, 980/100, 980/200 *MPE XL Version A.40.00*	Yes
	COBOLII/V Version A.02.02 *NIST-91/1664*	HP3000 Series 70 *MPE/V Version G.03.09*	5/1/92	High	HP3000 Series 37, 40, 42, 48, 54, 58, 64, 68, 70, 3000LX, 3000RX, 3000XE *MPE/V Version G.03.09*	Yes
IBM Canada, Ltd.	AIX PS/2 VS COBOL Compiler & AIX PS/2 VS COBOL Runtime Environment Version 1.10.0120 Release 1 *NIST-91/1901*	IBM PS/2 Model 80 *AIX for PS/2 Version 1.1*	8/1/92	High	IBM PS/2 VS Models 60, 70, 80 *AIX for PX/2 Version 1.1*	Yes
	COBOL/400 Version 2 Release 1.1 *NIST-91/2341*	AS/400 *OS/400 Version 2 Release 1.1*	11/1/92	Intermediate		
IBM Corporation	IBM SAA AD/CYCLE COBOL/370 Version 1 Release 1 *NIST-92/1021*	IBM 3090 *MVS/ESA Version 3*	12/1/92	High	IBM 390, 3000, 4381-T92, 9000 *MVS/ESA Version 3*	
	IBM SAA AD/CYCLE COBOL/370 Version 1 Release 1 *NIST-92/1022*	IBM 3090 *VM/ESA Version 1.0*	12/1/92	High	IBM 390, 3000, 4381-T92, 9000 *VM/ESA Version 1.0*	
	VS COBOL II Version 1 Release 3.2 *NIST-91/1441*	IBM 3090 *MVS/ESA Version 3* *VM/ESA Version ESA Release 1.0*	3/1/92 *(pending)*	High	IBM 370,390, 3000, 4300, 9000 *MVS/370 Version 1, MVS/XA Version 2, VM SP Release 6*	Yes
	VS COBOL II Version 1 Release 3.2 *NIST-91/1442*	IBM 4381 *VSE/ESA Version 1 Release 1*	3/1/92 *(pending)*	High	IBM 370,390, 3000, 4300, 9000 *VSE/ESA Version 1, Release 1*	Yes
Liant Software Corporation	RM/COBOL-85 Version 5.00.00 *NIST-90/2101*	IBM PS/2 Model 80 *PC/DOS Version 4.01*	10/1/92	High		
	RM/COBOL-85 Version 5.00.00 *NIST-90/2102*	NCR PC925 *SCO Unix System V/386 Release 3.2.0*	10/1/92	High	NCR PC925 *Interactive Unix System V/386 Release 2.2*	

COBOL PROCESSORS *Continued*

VENDOR	PROCESSOR ID & VSR #	HARDWARE & OPERATING SYSTEM	EXPIRY DATE	SUBSET	OTHER ENVIR HW/OS	NONCONFORMITIES
	RM/COBOL-85 Version 5.00.00 *NIST-90/2103*	NCR PC486/MC *AT&T Unix V.4 Version i386 Release 0.00.00.08*	10/1/92	High		
	RM/COBOL-85 Version 5.00.00 *NIST-90/2104*	IBM RISC System/6000 *AIX Version 3*	10/1/92	High		
	RM/COBOL-85 Version 5.00.00 *NIST-90/2106*	HP 9000 Model 325 *HP-UX Version 7.0*	10/1/92	High		
	RM/COBOL-85 Version 5.00.00 *NIST-90/2107*	HP 9000 Model 825 *HP-UX Version 7.0*	10/1/92	High		
	LPI-COBOL Version 06.06.00 *NIST-91/1401*	NCR PC486/MC (System 3340) *UNIX V/386 Release 4.0 Version 01.00.00.08*	6/1/92	High		
	LPI-COBOL Version 06.09.01 *NIST-91/1402*	Prime EXL 320 *UNIX V/386 Release 3.1*	6/1/92	High	Prime EXL 316 *UNIX V/386 Release 3.1*	
	LPI-COBOL Version 06.09.01 *NIST-91/1403*	Everex 386 (AGI 3000D) *UNIX V/386 Release 3.2*	6/1/92	High		
mbp Software and Systems GmbH	Visual COBOL XO Version 3.0 *NIST/NCC-91/956*	IBM AT *MS DOS Version 3.3*	9/1/92	High		
	Visual COBOL XO Version 3.0 *NIST/NCC-91/957*	Convergent Server PC (CTIX 386) *UNIX System V/386 Release 3.2*	9/1/92	High	Unisys 6000/50 Prime EXL-316 *Unix V/386 Release 3.2*	
Micro Focus	Micro Focus COBOL/2 Version 2.5 *NIST-91/1961*	IBM PS/2 Model 80 *OS/2 Version 1.3*	8/1/92	High	IBM PS/2 80, 70, 60, 65SX *IBM OS/2 Versions 1.2, 1.3*	
		IBM PS/2 Model 70 *IBM DOS Version 5.0*			IBM PS/2 80, 60, 65SX *IBM DOS Versions 3.3, 4.0, 5.0*	
		IBM PC/AT *IBM DOS Version 5.0*			IBM PC/AT, PC/XT *IBM DOS Versions 3.3*, 4.0, 5.0	
					IBM PS/2 70 *IBM DOS Versions 3.3, 4.0*	
	Micro Focus COBOL/2 for Unix Version 1.3 *NIST-91/1963*	Compaq Deskpro 386/25 *SCO Unix System V/386 Release 3.2*	8/1/92	High		

COBOL PROCESSORS *Continued*

VENDOR	PROCESSOR ID *& VSR #*	HARDWARE & *OPERATING SYSTEM*	EXPIRY DATE	SUBSET	OTHER ENVIR HW/*OS*	NONCON-FORMITIES
Microsoft Corporation	Microsoft COBOL Version 4.5 *NIST-91/1962*	IBM PS/2 Model 60 *IBM DOS Version 5.0* Compaq Deskpro 486 *Microsoft OS/2 Version 1.21*	8/1/92	High	IBM PS/2 Model 80 *IBM DOS Version 3.3*	
NCR Corporation	Micro Focus COBOL/2 for UNIX Version 1.2 *NIST-91/1965*	NCR PC 486/MC25, Model 3314 *UNIX System V/386 Release 4.0 Version 2*	8/1/92	High	NCR 3320, 3321, 3340, 3341, 3345, 3347, 3445, 3447, 3450 *UNIX System V/386 Release 4.0 Version 2*	Yes
Prime Computer, Inc.	COBOL85 Version 1.1.1-22.0 *NIST-90/2281*	P9955 - 64V mode machine architecture *PRIMOS Version 22.1.3*	12/1/92	Intermediate	Prime 50-Series machines 64V-mode machine architecture *PRIMOS Version 22.1.1*	
Pyramid Technologies, Corp.	COBOL85 Version 5.1 Release 92a030 *NIST-91/1861*	MIServer *OSx Version 5.1a Release 92a030*	3/1/93	High	Pyramid 9000; 98x *OSx Version 5.1a Release 92a030*	
Siemens Nixdorf Informations-systeme AG	COBOL85 Version 2.0A *NIST/NCC-92/958*	7.592I *BS2000 Version 10.0*	2/1/93	High		
Tandem Computers Inc.	COBOL85 Version C30 *NIST-91/1461*	Nonstop VLX *Guardian 90 Version C30*	3/1/92 *(pending)*	High	NonStop Cyclone, NonStop TXP, CLX, EXT *Guardian 90 Version C30*	Yes
UNISYS Corporation	A Series COBOL ANSI-85, Mark 4.0 2.0 *NIST-91/2211*	Unisys A10 *MCP/AS MARK 4.0*	10/1/92	High	Unisys Micro A, A1, A2, A3, A4, A5, A6, A9, A10, A12, A15, A16, A17, A19; *MCP/AS MARK 4.0*	
Wang Laboratories, Inc.	VS COBOL 85 Version 2.12.01 *NIST-91/2381*	WANG VS 100 *VS OS Version 7.30.00*	11/1/92	High	VS 5, 6, 15, 25, 45, 65, 85, 90, 100, 300; 5000, 7000, 8000, 10000 Series *VS OS Version 7.20.00* VS 300; 7000, 8000, 10000 Series *VS OS Version 7.30.00*	

2.8 FORTRAN PROCESSORS

VENDOR	PROCESSOR ID & VSR #	HARDWARE & OPERATING SYSTEM	EXPIRY DATE	LEVEL	OTHER ENVIR HW/OS	NONCONFORMITIES
Alliant Computer Systems Company	FX/Fortran Version 4.3 *NIST-91/2301*	FX/80 *Concentrix Version 5.7* with linker/loader:ld version 5.7 libfortran.a version 6.0	11/1/92	Full	FX/1, FX/4, FX/8, FX/40, FX/82; VFX/4, VFX/40, VFX/80, VFX/82 *Concentrix Version 5.7*	
	FX/Fortran Version 1.2 *NIST-91/2302*	FX/2800 Model 400 *Concentrix Version 2.1.02* with linker/loader:ld ver. 2.1.02	11/1/92	Full	FX/800, SRM/1 Models 200 and 400 *Concentrix Version 2.1*	
Amdahl Corporation	Amdahl Fortran 77 Version 10 Level 31 *NBS/ICST-88/3561A*	Amdahl 5860 *IBM MVS/SP Version 2.2.0*	12/1/92	Full	Amdahl 580, Amdahl Vector Processor *IBM MVS/SP Version 2*	
	Amdahl Enhanced Fortran 77 Version 10 Level 31 *NBS/ICST-88/3565A*	Amdahl 5860 *UTS Version 1.2*	12/1/92	Full	Amdahl 580, 5890, 5990 *UTS Version 1.2*	
	Amdahl Fortran 77/VP Version 10 Level 30 *NBS/ICST-88/3562A*	Amdahl 1200E *IBM MVS/SP Version 2.2.0*	12/1/92	Full	Amdahl 580 Amdahl Vector Processor *IBM MVS/SP Version 2*	
Apple Computer, Inc.	A/UX Fortran 77 Version 2 Release 2.0.1 *NIST-91/1741*	Apple Macintosh IIfx w/Motorola MC68030 CPU and MC68882 FPU *A/UX Version 2 Release 2.0.1*	6/1/92	Full	Macintosh IIci,IIcx,SE30,IIx; Mac IIsi w/MC68882 FPU; Mac II w/MC68882 PMMU *A/UX Version 2 Release 2.0.1*	
Bull HN	FORTRANA Release R3.0 *NIST-90/1322*	DPS6 PLUS Model 634 *GCOS6 HVS Version 2.0*	2/1/92 *(pending)*	Full	DPS6/EMMU Series *GCOS6 Mod 400 Release 4.1* DPS6 PLUS Series *HVS6 PLUS Version 2.0* DPS 6000 Series *GCOS6 HVS Version 2.0*	
	Fortran 77-ESV Version 8FV4.1 Update 0 *NIST-91/1682*	DPS-9000 *GCOS8 Version SR40201 (with SR40004)*	6/1/92	Full	DPS-90, DPS-8000 *GCOS8 Version SR40201 (with SR40004)*	
	Fortran SXL-3001 Version 01.00 *BIA/90/001*	DPX/2 210 *B.O.S. Versions 01.01 and 02.00*	11/15/92	Full	DPS/2 200 and 300 *B.O.S. Versions 01.01 and 02.00*	
Concurrent Computer Corporation	SP-2450 (Fortran 77) Version 2.0 *NIST-90/1001*	MC 5600 w/MC68881 and Lightning floating point hardware *RTU Version 5.0*	5/1/92	Full	MC5300, MC5400, MC5450, MC5700, w/MC68881 and Lightning floating point hardware *RTU Version 5.0*	
	SP-2450 (Fortran 77) Version 2.0 *NIST-90/1002*	MC 6300 w/MC68882 and Lightning floating point hardware *RTU Version 5.0*	5/1/92	Full	MC6350, MC6400, MC6450, MC6600, MC6700, MC6750 w/MC68882 and Lightning floating point hardware *RTU Version 5.0*	
	SP-2450 (Fortran 77) Version 1.7 *NIST-90/1003*	MC 8500 *RTU Version 5.1*	5/1/92	Full	MC8400 *RTU Version 5.1*	

FORTRAN PROCESSORS, *Continued*

VENDOR	PROCESSOR ID *& VSR #*	HARDWARE & *OPERATING SYSTEM*	EXPIRY DATE	LEVEL	OTHER ENVIR HW/*OS*	NONCONFORMITIES
	Fortran VII Z Version R06 Release 00 *NIST-90/1501*	3280 MPS *OS/32 Version R08 Release 03*	7/1/92	Full	3205, 3210, 3220, 3230, 3240, 3250, 3230XP, 3230MPS, 3260MPS, 3280E MPS; 8/32; Micro 3200CS*, Micro 3200ES*, Micro 3200 MPS* *OS/32 Version R08 Release 03*	
	Fortran VII O Version R06 Release 00 *NIST-90/1502*	3280 MPS *OS/32 Version R08 Release 03*	7/1/92	Full	3205, 3210, 3220, 3230, 3240, 3250, 3230XP, 3230MPS, 3260MPS, 3280E MPS; 8/32; Micro 3200CS*, Micro 3200ES*, Micro 3200 MPS* *OS/32 Version R08 Release 03*	
Control Data Corporation	Fortran/VE 1 Version 1.7 Level 780 *NIST-92/1421*	CYBER 180-995 *NOS/VE Version 1.6.1 Level 780*	4/1/93	Full	CYBER 180 Series; CYBER 2000 *NOS/VE Version 1.6.1 Level 780*	
	Fortran/VE 2 Version 2.6 Level 780 *NIST-92/1422*	CYBER 180-995 *NOS/VE Version 1.6.1 Level 780*	4/1/93	Full	CYBER 180 Series; CYBER 2000 *NOS/VE Version 1.6.1 Level 780*	
	Fortran 77 Version 2.2.0 *NIST-92/1103*	Control Data 4680 MP *EP/IX Version 1.4.2*	1/1/93	Full	Control Data 4000 Series *EP/IX Version 1.4.2*	
	Peak Fortran Version 1.1 *NIST-92/1104*	Control Data 4680 MP *EP/IX Version 1.4.2*	1/1/93	Full	Control Data 4000 Series *EP/IX Version 1.4.2*	
Convex Computer Corporation	Convex Fortran Version 7.0 *NIST-92/1521*	Convex C3820 *Convex OS Version 10.0*	4/1/93	Full	Convex C38 Series *Convex OS Version 10.0*	
	Convex Fortran Version 7.0 *NIST-92/1522*	Convex C240 *Convex OS Version 10.0*	4/1/93	Full	Convex C1, C2, C32 Series *Convex OS Version 9.1*	
	Convex Fortran Version 7.0 *NIST-92/1523*	Convex C3420 *Convex OS Version 10.0*	4/1/93	Full	Convex C34, 31, 53 Series *Convex OS Version 10.0*	
Cray Research, Inc.	CF Compiling System Release 5.0.1 *NIST-92/1221*	Cray X-MP *UNICOS Release 6.1.5A*	3/1/93	Full	Cray X-MP EA & Y-MP Series in X-mode *UNICOS Release 6.1.5A*	
	CF77 Compiling System Release 5.0.1 *NIST-92/1222*	Cray Y-MP/832 *UNICOS Release 6.1.5A*	3/1/93	Full	Cray Y-MP Series; Cray X-MP EA Series *UNICOS Release 6.1.5A*	
	CF77 Compiling System Release 5.0.1 *NIST-92/1223*	Cray-2S 4/128 *UNICOS Release 6.1.5A*	3/1/93	Full	Cray-2S Series; Cray-2 Series *UNICOS Release 6.1.5A*	

FORTRAN PROCESSORS, *Continued*

VENDOR	PROCESSOR ID *& VSR #*	HARDWARE & *OPERATING SYSTEM*	EXPIRY DATE	LEVEL	OTHER ENVIR HW/*OS*	NONCON-FORMITIES
Digital Equipment Corporation	VAX Fortran Version 5.7 *NIST-91/2021*	VAX 6000-420 *VMS Version 5.4*	10/1/92	Full	VAX 4000 Mod 200, 300; 6000 Series 200, 300, 400, 500; 8200, 8250, 8300, 8350, 85xx, 8600, 8650, 8700, 8800, 8810, 8820, 8830, 8840; 9000 Mod 210 Ser 400; VAXft 3000-310; VAX-11/730/750/780/785; MicroVAX II, 2000, 3100, 3300, 3400, 3500, 3600, 3800, 3900; VAXstation II, 2000, 3100, 3200, 3500, 3520, 3540; VAX-server 3100, 3300, 3400, 3500, 3600, 3602, 3800, 3900, 4000 Mod 200, 300; 6000 Mod 210/220, 310/320, 410/420, 510/520 *VMS Version 5.4*	
	VAX Fortran HPO Version 1.3 *NIST-91/2022*	VAX 6000-420 *VMS Version 5.4*	10/1/92	Full	VAX 4000 Mod 200, 300; 6000 Series 200, 300, 400, 500; 8200, 8250, 8300, 8350, 85xx, 8600, 8650, 8700, 8800, 8810, 8820, 8830, 8840; 9000 Mod 210 Ser 400; VAXft 3000-310; VAX-11/730/750/780/785; MicroVAX II, 2000, 3100, 3300, 3400, 3500, 3600, 3800, 3900; VAXstation II, 2000, 3100, 3200, 3500, 3520, 3540; VAX-server 3100, 3300, 3400, 3500, 3600, 3602, 3800, 3900, 4000 Mod 200, 300; 6000 Mod 210/220, 310/320, 410/420, 510/520 *VMS Version 5.4*	
	VAX Fortran HPO Version 1.3 *NIST-91/2023*	VAX 6000-420 VP *VMS Version 5.4*	10/1/92	Full	VAX 4000 Mod 200, 300; 6000 Series 200, 300, 400, 500; 8200, 8250, 8300, 8350, 8500, 8530, 8550, 8600, 8650, 8700, 8800, 8810, 8820, 8830, 8840; 9000-210 -400 -420 -430 -440; VAXft 3000-310; VAX-11/730/750/780/785; MicroVAX II, 2000, 3100, 3300, 3400, 3500, 3600, 3800, 3900; VAXstation II, 2000, 3100, 3200, 3500, 3520, 3540; VAX-server 3100, 3300, 3400, 3500, 3600, 3602, 3800, 3900, 4000 Mod 200, 300; 6000 Mod 210/220, 310/320, 410/420, 510/520 *VMS Version 5.4*	

FORTRAN PROCESSORS, *Continued*

VENDOR	PROCESSOR ID *& VSR #*	HARDWARE & *OPERATING SYSTEM*	EXPIRY DATE	LEVEL	OTHER ENVIR HW/OS	NONCONFORMITIES
	VAX Fortran Ultrix Version 5.1 *NIST-91/2024*	VAX 6000-420 *Ultrix Version 4.2*	10/1/92	Full	VAX 4000 Mod 200, 300; 6000 Series 200, 300, 400, 500; 8200, 8250, 8300, 8350, 85xx, 8600, 8650, 8700, 8800, 8810, 8820, 8830, 8840; 9000 Mod 210 Ser 400; VAXft 3000-310; VAX-11/730/750/780/785; MicroVAX II, 2000, 3100, 3300, 3400, 3500, 3600, 3800, 3900; VAXstation II, 2000, 3100, 3200, 3500, 3520, 3540; VAX-server 3100, 3300, 3400, 3500, 3600, 3602, 3800, 3900, 4000 Mod 200, 300; 6000 Mod 210/220, 310/320, 410/420, 510/520 *VMS Version 5.4*	
	DEC Fortran Version 3.1 *NIST-91/2025*	DECstation 5000 *Ultrix Version 4.2*	10/1/92	Full	Decstation 2100, 3100, 3100S; 5000 Mod 200, 200CX, 200PX, 200PXG, 200PXG Turbo; DECsystem 3100, 5000, Mod 200, 5100, 5400, 5500, 5810, 5820, 5830, 5840 *Ultrix Version 4.2*	
	DEC Fortran Version 3.1 *NIST-91/2026*	DECstation 3100 *Hercules/1 Version 1.0*	10/1/92	Full	Decstation 2100, 3100, 3100S; 5000 Mod 200, 200CX, 200PX, 200PXG, 200PXG Turbo; DECsystem 3100, 5000, Mod 200, 5100, 5400, 5500, 5810, 5820, 5830, 5840 *Hercules/1, Version 1.0*	
Edinburgh Portable Compilers LTD	EPC Fortran 77 Version 2.5 *NIST/NCC-90/945*	Solbourne Series 5/500 w/Sparc Processor *Sun OS Version 4*	11/1/92	Full	Solbourne Series 5/600, 5/800, 5E/900, S/4000 *Sun OS Version 4*	
	EPC Fortran 77 Version 2.5 *NIST/NCC-90/947*	ICL DRS IXP 95 w/80486/80487 *ICL DRS/NX V.4.0 (IXP) Unix*	11/1/92	Full		
	EPC Fortran 77 Version 2.5 *NIST/NCC-90/948*	ICL DRS 6000 *ICL DRS/NX V.4.0 UNIX*	11/1/92	Full		
Electronic Data Systems Corporation	SVS Fortran/Unix Version 2.8 *NIST-91/1401*	Prime EXL 320 *Prime Unix V/386 Release 3.1*	5/1/92	Full		Yes
	SVS Fortran/Unix Version 2.8 *NIST-91/1402*	Everex AGI System 3000 D *Interactive Unix V/386 Release 3.2*	5/1/92	Full		Yes

FORTRAN PROCESSORS, *Continued*

VENDOR	PROCESSOR ID & VSR #	HARDWARE & OPERATING SYSTEM	EXPIRY DATE	LEVEL	OTHER ENVIR HW/OS	NONCONFORMITIES
Encore Computer Corporation	Fortran 77 Version 2.1 *NIST-91/1551*	Multimax 320 *UMAX V Version 2.4* *MACH Version 1.0* *UMAX 4.3 Version R4.1*	4/1/92	Full	Multimax 310, 510, 520 *UMAX V Version 2.4* *MACH Version 1.0* *UMAX 4.3 Version R4.1*	
	Parallel Fortran Plus Version 1.0 *NIST-91/1552*	Encore 91 *UMAX V Version 3.0*	4/1/92	Full		
	Fortran-77+ Version 5.0C *NIST-91/1541*	Concept 32/97 *MPX-32 Version 3.5u01*	4/1/92	Full	Concept 32/67, 32/2040, 32/2030, 32/2050 *MPX-32 Version 3.5u01*	
	GCF Version 2.0 *NIST-91/1542*	Concept 32/97 *MPX-32 Version 3.5u01*	4/1/92	Full	Concept 32/67, 32/2040, 32/2030, 32/2050 *MPX-32 Version 3.5u01*	
Fujitsu America, Inc.	Fortran 77-M Version 10 Level 31 *NBS/ICST-88/3561*	Amdahl 5860 *IBM MVS/SP Version 2.2.0*	12/1/92	Full	Amdahl 580; Amdahl Vector Processor *IBM MVS/SP Version 2*	
	Fortran 77/VP-M Version 10 Level 30 *NBS/ICST-88/3562*	Amdahl 1200E *IBM MVS/SP Version 2.2.0*	12/1/92	Full	Amdahl Vector Processor; Amdahl 580 *IBM MVS/SP Version 2*	
	Fortran 77 Version 10 Level 31 *NBS/ICST-88/3563*	Amdahl 1200E *VSP Version 10*	12/1/92	Full	FACOM M *FACOM OS IV/F4 MSP Edition 20* FACOM VP; Amdahl Vector Processor *VSP Version 10*	
	Fortran 77/VP Version 10 Level 30 *NBS/ICST-88/3564*	Amdahl 1200E, FACOM VP *VSP Version 10*	12/1/92	Full	FACOM M *FACOM OS IV/F4 MSP Edition 20* FACOM VP; Amdahl Vector Processor *VSP Version 10*	
	UTS Fortran 77 Version 10 Level 31 *NBS/ICST-88/3565*	Amdahl 5890 *UTS Version 1.2*	12/1/92	Full	Amdahl 580 *UTS Version 2.0* FACOM M *UTS/M Version 10* FACOM S3000 *UTS/S Version 10*	
	UXP/M Fortran77 EX/VP Version 12 Level 10 *NIST-91/1601*	Fujitsu VP2400/10 *UXP/M Version 10 Level 10*	2/1/93	Full	Fujitsu VP2000 Series *UXP/M Version 10 Level 10*	
	UXP/M Fortran77 EX Version 12 Level 10 *NIST-91/1602*	Fujitsu VP2400/10 *UXP/M Version 10 Level 10*	2/1/93	Full	Fujitsu VP2000 Series Fujitsu M Series *UXP/M Version 10 Level 10*	
HNSX Supercomputers, Inc.	Fortran77/SX (f77sx) Release 020 *NIST-92/1161*	NEC SX-3 Model 12 *SUPER-UX Release 1.22*	1/1/93	Full	NEC SX-3 Series; HNSX SX-3 Series *SUPER-UX Release 1.22*	

FORTRAN PROCESSORS, *Continued*

VENDOR	PROCESSOR ID *& VSR #*	HARDWARE & *OPERATING SYSTEM*	EXPIRY DATE	LEVEL	OTHER ENVIR HW/*OS*	NONCONFORMITIES
Hewlett-Packard Company	HP Fortran 77/HP/UX Version A.08.14 *NIST-92/1081*	HP9000 Model 835 *HP-UX Version A.08.00*	1/1/93	Full	HP9000, Models 815, 825, 840, 850, 855, 870 *HP-UX Version A.08.00*	
	HP 9000 S700 Fortran 77 Version A.08.05 *NIST-92/1083*	HP9000 Model 750 *HP-UX Version 8.05*	1/1/93	Full	HP9000, Models 730, 720 *HP-UX Version* 8.05	
	HP 9000 S300 Fortran 77 Version B.08.00 *NIST-92/1084*	HP9000 Model 425 *HP-UX Version* 8.00	1/1/93	Full	HP9000, Models 400, 433, 345, 380, 385 *HP-UX Version* 8.00	
	HP Fortran 77/XL Version 4.30 *NIST-92/1085*	HP3000 Model 930 *MPE XL Version A.50.10*	1/1/93	Full	HP3000, Models 925, 935, 950, 955, 970 *MPE XL Version A.50.10*	
IBM Canada, LTD	IBM AIX XL Fortran Compiler/6000 Version 2 Release 2 *NIST-92/1341*	IBM RISC System/6000 Powerstation 530 *IBM AIX Version 3 Release 2*	3/1/93	Full	IBM RISC System/6000 Powerstation/Powerserver Mods 220, 320H, 340, 350, 520H, 530, 530E, 540, 550, 560, 560F, 730, 930, 950 *AIX for RISC System/6000 Version 3 Release 2*	
	IBM AIX Fortran Compiler/6000 Version 2 Release 2 *NIST-91/2201*	IBM AIX RISC System /6000 POWERstation Model 540 *AIX V3 for RISC System/6000 Version 3 Release 1*	8/1/92	Full	RISC System/6000 Powerstation 320, 320H, 530, 730, 550; Powerserver 320, 520, 530, 540, 930, 950 *AIX V3 for RISC System/6000 Version 3 Release 1*	
	VS Fortran Version 1 Release 1 *NIST-91/1701*	IBM RT *AIX Version 2 Release 1*	5/1/92	Full		
IBM Corporation	VS Fortran Version 2 Release 5 *NIST-91/1921*	IBM 4381 *VM/SP Version 1 Release 5*	8/1/93	Full	S/370 30xx, 43xx, 93xx, S/390, ES/9000 *VM/XA Version 1, Rel 1, 2 VM/ESA Version 1, Rel 1, 1.1*	
	VS Fortran Version 2 Release 5 *NIST-91/1922*	IBM S/370 3090 *MVS/SP Version 4 Release 2*	8/1/93	Full	S/370 30xx, 43xx, 93xx, S/390, ES/9000 *MVS/SP Version 1, Release 3 MVS/SP Version 2, Release 2 MVS/SP Version 3, Release 1*	
	VS Fortran Version 2 Release 5 *NIST-90/1823*	IBM 3090 *AIX/370 Version 1 Release 2*	8/1/93	Full	S/370, 30xx, 43xx, 93xx *AIX/370 Version 1, Release 2*	
	IBM RT PC VS Fortran Version 1.1.0 *NIST-89/1441*	IBM RT PC *IBM RT PC AIX Version 2.2.1*	5/1/92	Full		
Intergraph Corporation	CLIPPER Advanced Optimizing Fortran, Version 1.40 *NIST-92/1041*	CLIPPER IS4000 *CLIX, Version 5.7.3*	12/1/92	Full	CLIPPER C300 and C400 Series *CLIX, Version 5.7.3*	

FORTRAN PROCESSORS, *Continued*

VENDOR	PROCESSOR ID *& VSR #*	HARDWARE & *OPERATING SYSTEM*	EXPIRY DATE	LEVEL	OTHER ENVIR HW/*OS*	NONCON-FORMITIES
Language Systems Corporation	Language Systems Fortran Version 3.0 *NIST-91/2101*	Apple Macintosh IIfx *Macintosh OS Version 7.0*	9/1/92	Full	Apple Macintosh IIcx *Macintosh OS Version 7.0*	
Liant Software Corporation	Fortran/400, Version 1 Release 3 *NIST-92/1181*	IBM AS/400 B4500 *IBM OS/400, Version 1*	1/1/93	Full		
	Fortran/400, Version 2 Release 1 *NIST-92/1182*	IBM AS/400 B4500 *IBM OS/400, Version 2*	1/1/93	Full		
Microsoft Corporation	Microsoft Fortran Version 5.1 *NIST-91/1841*	IBM PS/2 Model 80/386, 80387 math co-processor *MS-DOS Version 5.0*	7/1/92	Full		
		COMPAQ DESKPRO 486/25 *OS/2 Version 1.2*				
		COMPAQ 286, 80287 math co-processor *DOS Version 3.31*				
		Everex 386, 80287 math co-processor *DOS Version 3.31*				
MIPS Computer Systems, Inc.	Mips Fortran Version 3.0 Release 3.0 *NIST-92/1121*	M/120 *RISC/os Version 5.0 Release 5.0*	1/1/93	Full	M/500, M/800, M/1000, M/2000, M/120, RC3260, RC3260G, RC3240, RC3330, RS3330, RC3350, RC3360, RC2030, RS2030, RC3230, RS3230, RC6260, RC6280, RC6280(scsi base) *RISC/os Version 5.0 Rel 5.0*	
Modular Computer Systems	MODCOMP GLS-F77 Release A.0 *NIST-89/1961*	MODCOMP 9730 *REAL/IX Release A.0*	9/1/92	Full	MODCOMP 9720, 9740 *REAL/IX Release A.0*	
	MODCOMP Fortran 77/32 Release B.2 *NIST-89/1962*	MODCOMP 32/87 *MAX 32 Release D.0*	9/1/92	Full	MODCOMP 32/85, 9230, 9250 *MAX 32 Release D.0*	
	MODCOMP Fortran 77/16 Release B.2 *NIST-89/1963*	MODCOMP Classic 7860 *MAX IV Release K.0*	9/1/92	Full	MODCOMP 32/85, 32/87, 9230, 9250 *MAX IV Release K.0*	
Olivetti Systems & Networks s.r.l.	Green Hills Fortran 77 Release 1.1 *IMQ/FCVS-001/91*	Olivetti LSX 5010 *Unix System V R4.0 Version 2.0*	12/12/92	Full	LSX 5000, M4xx, M3xx, M380/XP9 *Unix System V R4.0 Version 2*	

VENDOR	PROCESSOR ID *& VSR #*	HARDWARE & *OPERATING SYSTEM*	EXPIRY DATE	LEVEL	OTHER ENVIR *HW/OS*	NONCONFORMITIES
Prime Computer, Inc.	Fortran 77 Release T3.0-23.0 *NIST-91/1721*	Prime Model 9955 *Primos Revision 23.0*	5/1/93	Full	2350 2450 2355 4050 4150 4450 6150 6350 6550 2550 2655 2755 9650 9655 9750 9755 9950 9955-II 5310 5320 5330 5340 w/32IX-mode arch.; 2350 2450 2355 4050 4150 4450 6150 6350 6550 2250 2550 2655 2755 9650 9655 9750 9755 9950 9955-II 750 850 5310 5320 5330 5340 w/32I-mode arch. 2350 2450 2355 4050 4150 4450 6150 6350 6550 2250 2550 2655 2755 9650 9655 9750 9755 9950 9955-II 750 850 5310 5320 5330 5340 w/64V-mode arch. *PRIMOS Revision 23.0*	
Salford Software Limited	FTN77/386 Version 2.60 *NIST/NCC-91/951*	Olivetti M380/XPI *MS DOS Version 5.00*	9/16/92	Full	Compaq Deskpro 386/16, 386/20, 386/25, 386/33; Dell 310, 320, w/A02 BIOS, G03 m/board, 325; HP Vectra RS/20; IBM Models 70, 80; Toshiba T5100, T5200, 3200SX; Tandon 386, 386SX *MS-DOS Ver. 3.30, 4.01, 5.00*	
	FTN77/486 Version 2.60 *NIST/NCC-91/952*	TANDON 486SL *MS-DOS Version 5.00*	9/16/92	Full	Compaq 486; Dell 425; HP Vectra/486; Olivetti CP486/25 Research Machines VX-486 *MS-DOS Ver. 3.30, 4.01, 5.00*	
	FTN77/ix Version 1.12 *NIST/NCC-91/953*	Elonex 386S-200 *SCO UNIX System V/386 Release 3.2*	9/16/92	Full	Compaq Deskpro 386/16, 386/20, 386/25, 386/33; Compaq 486; Dell 425; *SCO UNIX System V/386 Release 3.2*	
	PRIME (I-mode) FTN77I Version 233 *NIST/NCC-91/954*	Prime 9955 Model I *PRIMOS Revision 21.0.5q*	9/16/92	Full	Prime 50-series w/I-mode instruction set *Primos Revision 19.0 to 21.0.5q*	
	PRIME (V-mode) FTN77 Version 233 *NIST/NCC-91/955*	Prime 9955 Model I *PRIMOS Revision 21.0.5q*	9/16/92	Full	Prime 50-series w/V-mode instruction set *Primos Revision 19.0 to 21.0.5q*	
Siemens Nixdorf Informations-systeme AG	FOR1 V2.2A *GMD/VAL-92-003*	Siemens 7.592-I *BS2000 V10.0A*	12/31/92	Full		
	Sinix Fortran 77 V1.2B *GMD/VAL-92-009*	RM600 *Sinix-P V5.41*	12/31/92	Full		

FORTRAN PROCESSORS, *Continued*

VENDOR	PROCESSOR ID *& VSR #*	HARDWARE & *OPERATING SYSTEM*	EXPIRY DATE	LEVEL	OTHER ENVIR HW/*OS*	NONCON-FORMITIES
Silicon Graphics Computer Systems Inc.	Fortran 4D77 Release S4-FTN 1-4.0 *NIST-91/1201*	IRIS 4D/25 *IRIX 4D1-4.0*	3/1/93	Full	IRIS 4D/20, 4D/25, 4D/35, 4D/70, Power Series *IRIX 4D1-4.0*	
Sun Microsystems, Inc.	Sun Fortran (FOR-1.4-4-3-5) Version 1 Release 4 *NIST-91/1301*	SUN-3/80 w/MC 68882 *SUNOS (SM3-07) Version 4 Release 1*	3/1/93	Full	SUN-3/470, SUN-3/480; SUN-3/60, SUN-3/180, SUN 3/260 w/MC 68882 *SUNOS (SM3-07) Version 4 Release 1*	
	Sun Fortran (FOR-1.4-4-4-5) Version 1 Release 4 *NIST-91/1302*	SPARCstation 2 (SUN-4/75) w/FPU (TI TMS390C602A) *SUNOS (SS2-07) Version 4 Release 1*	3/1/93	Full	SPARCserver 2 (SUN-4/75X) w/FPU (TI TMS390C602A) *SUNOS (SS2-07) Version 4 Release I*	
	Sun Fortran (FOR-1.4-4-4-5) Version 1 Release 4 *NIST-91/1303*	SPARCserver 330 (SUN-4/330) w/FPU2 (TI 8847) *SUNOS (SS2-07) Version 4 Release 1*	3/1/93	Full	SPARCserver 470 (SUN-4/470) w/FPU2 (TI 8847) *SUNOS (SS2-07) Version 4 Release I*	
	Sun Fortran (FOR-1.4-4-4-5) Version 1 Release 4 *NIST-91/1304*	SPARCserver 490 (SUN-4/490) w/FPU2 (TI 8847) *SUNOS (SS1-07) Version 4 Release 1*	3/1/93	Full		
	Sun Fortran (FOR-1.4-4-4-5) Version 1 Release 4 *NIST-91/1305*	SPARCstation IPC (SUN-4/40) w/FPU (WEITEK 3172) *SUNOS (SS2-07) Version 4 Release 1*	3/1/93	Full	SPARCstation SLC (SUN-4/20); SPARCstation 1+ (SUN-4/65) w/FPU (WEITEK 3172) *SUNOS (SS2-07) Version 4 Release 1*	
Unisys Corporation	A Series Fortran77 Mark 4.0 *NIST-91/2212*	Unisys A10 *MCP/AS Mark 4.0*	10/1/92	Full	Unisys A Series, Micro A, A1, A2, A3, A4, A5, A6, A9, A10, A12, A15, A16, A17, A19 *MCP/AS, Mark 4.0*	

2.9 Ada PROCESSORS

The following are Ada compilers that have been validated by the Ada Joint Program Office (AJPO). Compilers are listed in order of vendor. The list is updated monthly, and presently includes 236 base compilers and 180 compilers derived from base implementations. For the most current information on validated Ada compilers, please contact the Ada Information Clearinghouse at (703) 685-1477.

For background information, please see "An Introduction to the Validation Process".

(Key: * = Validated through Registration, base system above)
#YYMMDDFX.XXNNN = Certificate Number: YYMMDD = date on-site testing was completed;
F = Ada Validation Facility;
X.XX = ACVC Version;
NNN = sequence number assigned by AVO

The extension of ACVC 1.11 certificates is to "at least" 1 March 1993. The current Ada 9X Transition plan calls for ACVC 1.11 to expire 1 June 1992, with certificates expiring 12 months later (1 June 1993).

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
AETECH, Inc. IntegrAda 386 5.1.0 (#901120W1.11087)	Northgate 386/25 (under Phar Lap/DOS 3.3)	Northgate 386/25 (under MS DOS 3.3)
*Validated by Registration AETECH, Inc. IntegrAda 386 5.1.0 (BASE #901120W1.11087)	Any Computer System Comprising: cpu: Intel 80386, fpu: optional, memory: 4 MByte RAM, disk: 40 MByte hard drive (under MS DOS 3.3)	Any Computer System Comprising: cpu: Intel 80386, fpu: optional, memory: 4 MByte RAM, disk: 40 MByte hard drive (under Phar Lap/DOS 3.3)
AETECH, Inc. IntegrAda 5.1.0 POSIX (#901129W1.11086)	Unisys PW/2 386 (under SCO Unix 3.2)	Same as Host
*Validated by Registration AETECH, Inc. IntegrAda Posix 5.1.0 (BASE #901129W1.11086)	Any Computer System Comprising: cpu: Intel 80386, fpu: optional, memory: 4 MByte RAM, disk: 60 MByte hard drive (under SCO Unix 3.2)	Same as Host
Aitech Defense Systems, Inc. AI-ADA/88K Version 2.4 (#900930W1.11030)	VAXstation 3100 Cluster (under VMS 5.3)	Tadpole TP880V (88100-based VME board) (bare machine)
*Validated by Registration Aitech Defense Systems, Inc. AI-ADA/88K, Version 2.4 (BASE #900930W1.11030)	All DEC MicroVAX, VAXstation, VAXserver, VAX-11, VAX 8xxx & VAX 6xxx series (under VMS versions 5.0, 5.1, 5.2 & 5.3, as supported)	Tadpole TP880V (88100-based VME board) & Motorola MVME181 (88100-based VME board) (bare machines)
Aitech Defense Systems, Inc. AI-ADA/96K, Version 3.0 (#911012W1.11224)	VAXstation 3100 Cluster (under VMS 5.3)	DSP96002 ADS board (bare machine)
Aitech Defense Systems, Inc. AI-ADA/96K, Version 3.0 (#911012W1.11225)	Sun-4/330 (under SunOS 4.1.1)	DSP96002 ADS board (bare machine)

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
Alliant Computer Systems Corporation Alliant FX/Ada-2800 Compiler, Version 1.0 (#901218W1.11105)	Alliant FX/2800 (under Concentrix Release 2.0)	Same as Host
Alliant Computer Systems Corporation Alliant FX/Ada Compiler, Version 2.3 (#901218W1.11106)	Alliant FX/80 (under Concentrix Release 5.7)	Same as Host
Alsys AlsyCOMP_053, Version 1.82 (#900509I1.11009)	VAX 8530 (under VMS, Version 5.1)	Same as Host
Alsys AlsyCOMP_042, Version 5.3 (#900627N1.11013)	IBM 9370 Model 90 (under AIX/370 Version 1.2)	Same as Host
Alsys AlsyCOMP_026, Version 1.82 (#900814I1.11040)	Sun-3/60 (under SunOS, Version 4.0.3)	Same as Host
Alsys AlsyCOMP_025, Version 1.83 (#900814I1.11041)	MIPS M/120-5 (under RISC/os, Version 4.0)	Same as Host
Alsys AlsyCOMP_046, Version 5.3 (#901022A1.11043)	Sony NEWS NWS-1850 (under NEWS-OS 3.3)	Same as Host
*Validated by Registration Alsys AlsyCOMP_046, Version 5.3 (BASE #901022A1.11043)	Sony NEWS series 1250, 15xx, 17xx, 18xx & 19xx (under NEWS-OS versions 3.3 & 3.4)	Any Host
Alsys AlsyCOMP_004, Version 5.3 (#901022A1.11044)	Apollo DN4000 (under Domain/OS SR10.2)	Same as Host
*Validated by Registration Alsys AlsyCOMP_004, Version 5.3 (BASE #901022A1.11044)	Apollo DN3000, DN3500, DN4000 & DN4500 (under Domain/OS SR10.2 & SR10.3)	Any Host
Alsys AlsyCOMP_050, Version 5.3 (#901022A1.11045)	Bull DPX/2 320 (under B.O.S. 02.00.05)	Same as Host

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
*Validated by Registration Alsys AlsyCOMP_050, Version 5.3 (BASE #901022A1.11045)	Bull DPX 2/210, /220, /320, /340 & /360 (under BOS 02.00.05 & 2.00.10)	Any Host
Alsys AlsyCOMP_002, Version 5.3 (#901022A1.11046)	HP 9000s350 (under HP-UX 6.5)	Same as Host
*Validated by Registration Alsys AlsyCOMP_002, Version 5.3 (BASE #901022A1.11046)	HP 9000 Series 300, all models (under HP-UX 6.5 & 7.0)	Any Host
Alsys AlsyCOMP_005, Version 5.3 (#901022A1.11047)	Sun-3/260 (under SunOS 3.2)	Same as Host
*Validated by Registration Alsys AlsyCOMP_005, Version 5.3 (BASE #901022A1.11047)	Sun 3/50, /60, /75, /80, /160, /260, /280, /470 & /480 (under SunOS 3.2, 3.5, 4.0 & 4.1)	Any Host
Alsys AlsyCOMP_035, Version 5.3 (#901022A1.11048)	CETIA Unigraph 6000 (under Unigraph/X 3.1)	Same as Host
*Validated by Registration Alsys AlsyCOMP_035, Version 5.3 (BASE #901022A1.11048)	Unigraph 1000/325, 2000/50, 2000/250, 2000/325, 3000/325-333, 6000/325-333, 7000/325, 8000/325 & 9000 (under Unigraph/X 3.1 & 3.1.1)	Any Host
Alsys AlsyCOMP_016 Version 5.1 (#901102W1.11055)	Compaq Deskpro 386 (under MS-DOS 3.30, Phar Lap 2.0)	Same as Host
Alsys AlsyCOMP_016 Version 5.1 (#901102W1.11056)	CompuAdd 320 (under MS-DOS 3.30, Phar Lap 2.0)	Same as Host
*Validated by Registration Alsys AlsyCOMP_016 Version 5.1 (BASE #901102W1.11056)	Any Computer System Comprising: cpu: Intel 80386; fpu: optional; memory: 5 MByte RAM; disk: 10 MByte (under MS-DOS 3.30, Phar Lap 2.0)	Same as Host

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
*Validated by Registration Alsys AlsyCOMP_016, Version 5.1 (BASE #901102W1.11056)	HP Vectra RS/20, RS/20C, RS/25 & RS/25C; AST Premium 386; and Unisys 386 & Desktop III (under MS-DOS 3.30, Phar Lap 2.0)	Any Host
Alsys AlsyCOMP_016 Version 5.1 (#901102W1.11057)	ALR Power Veisa 486 (under MS-DOS 3.30, Phar Lap 2.0)	Same as Host
Alsys AlsyCOMP_003 Version 5.1 (#901102W1.11058)	HP Vectra RS/25C (under MS-DOS 3.30)	Same as Host
*Validated by Registration Alsys AlsyCOMP_003, Version 5.1 (BASE #901102W1.11058)	Unisys Desktop III (under MS-DOS 3.30)	Same as Host
Alsys AlsyCOMP_003 Version 5.1 (#901102W1.11059)	Zenith Z-248 Model 50 (under MS-DOS 3.30)	Same as Host
*Validated by Registration Alsys AlsyCOMP_003, Version 5.1 (BASE #901102W1.11059)	HP Vectra ES/12; and IBM PC/AT (all models) (under MS-DOS 3.30)	Any Host
*Validated by Registration Alsys AlsyCOMP_003, Version 5.1 (BASE #901102W1.11059)	ICS SB286SC/12 (under MS-DOS 3.30)	Same as Host
Alsys Alsycomp_037, Version 5.2 (#901114N1.11065)	INMOS T800 transputer on a B405 TRAM (bare) with an INMOS B008 Communications link implemented in an IBM PC/AT (under MS-DOS 3.1 and INMOS Iserver V1.3)	INMOS T800 transputer on a B405 TRAM (bare) using an IBM PC/AT under MS-DOS 3.1 running INMOS Iserver 1.3 for file-server support via an INMOS B008 board link
*Validated by Registration Alsys AlsyCOMP_037, V5.3 (BASE #901114N1.11065)	INMOS T800 transputer on a B403 TRAM (bare) with an INMOS B008 Communications link implemented in an IBM PC/AT (under MS-DOS 3.1 and INMOS Iserver V1.3)	INMOS T800 transputer on a B405 TRAM (bare) using an IBM PC/AT under MS-DOS 3.1 running INMOS Iserver 1.3 for file-server support via an INMOS B008 board link; INMOS T425 transputer on a B403 TRAM (bare) using an IBM PC/AT under MS-DOS 3.1 running INMOS Iserver 1.3 for file-server support via an INMOS B008 board link

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
Alsys AlsyCOMP_012, Version 5.3 (BASE #901116A1.11066)	HP 9000 Series 300 (all models) (under HP-UX 6.5 & 7.0)	Motorola M68332EVS Evaluation System Customers (CPU32) (bare machine, using ARTK 5.3)
*Validated by Registration Alsys AlsyCOMP_012, Version 5.3 (BASE #901116A1.11066)	HP 9000 Series 300 (all models) (under HP-UX 6.5 & 7.0)	Motorola M68332EVS Evaluation System Customers (CPU32) (bare machine, using ARTK 5.3)
*Validated by Registration Alsys AlsyCOMP_012, Version 5.3 (BASE #901116A1.11066)	HP 9000 Series 300, Models 340, 345, 360, 370 & 375 (under HP-UX 6.5 & 7.0)	Motorola MVME101 (68000), MVME121 (68010), MVME135-1 (68020/68881) & MVME147-1 (68030/68882) (bare machines, using ARTK 5.3)
Alsys AlsyCOMP_036, Version 5.3 (#901116A1.11067)	Apollo DN4000 (under Domain/OS SR10.2)	Motorola MVME147-1 (68030/68882) (bare machine, using ARTK Version 5.3)
*Validated by Registration Alsys AlsyCOMP_036, Version 5.3 (BASE #901116A1.11067)	Apollo DN 3000, 3500, 4000 & 4500 (under Domain/OS SR10.2 & SR10.3)	Motorola MVME101 (68000), MVME121 (68010), MVME135-1 (68020/68881) & MVME147-1 (68030/68882) (bare machines, using ARTK 5.3)
Alsys AlsyCOMP_015, Version 5.3 (#901116A1.11068)	Sun 3/260 (under SunOS 3.2) (bare machine, using ARTK Version 5.3)	Motorola MVME121 (68010)
*Validated by Registration Alsys AlsyCOMP_015, Version 5.3 (BASE #901116A1.11068)	Sun 3/50, /60, /75, /80, /160, /260, /280, /470 & /480 (under SunOS 3.2, 3.5, 4.0 & 4.1)	Motorola MVME101 (68000), MVME121 (68010), MVME135-1 (68020/68881) & MVME147-1 (68030/68882) (bare machines, using ARTK 5.3)
Alsys Alsycomp_017, Version 5.2 (#901118N1.11064)	MicroVAX II (under VMS V5.3)	INMOS T425 transputer on a B403 TRAM (bare) using the Host running INMOS Iserver 1.3 for file-server support via a CAPLIN QT0 board link
*Validated by Registration Alsys AlsyCOMP_017, V5.3 (BASE #901118N1.11064)	MicroVAX II (under VMS V5.3)	INMOS T425 transputer on a B403 TRAM (bare) using the Host running INMOS Iserver 1.3 for file-server support via a CAPLIN QT0 board link; INMOS T800 transputer on a B405 TRAM (bare) using the Host running INMOS Iserver 1.3 for file-server support via a CAPLIN QT0 board link
Alsys AlsyCOMP_018 Version 5.2 (#901120A1.11070)	MicroVAX 3100 (under VMS 5.3)	Same as Host

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
*Validated by Registration Alsys AlsyCOMP_018, Version 5.2 (BASE #901120A1.11070)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 4000, VAX 6000, VAX 8000 & VAX 9000 Series of computers (as supported) (under VMS 5.2 & 5.4)	Any Host
Alsys AlsyCOMP_006, Version 5.3 (#901125N1.11071)	IBM 9370 Model 90 (under VM/IS CMS release 5.1)	Same as Host
Alsys AlsyCOMP_023, Version 5.3 (#901125N1.11072)	IBM 370 3084Q (under MVS/XA release 3.2)	Same as Host
Alsys AlsyCOMP_011, Version 5.3 (#901127A1.11069)	VAX 6210 (under VMS 5.2) (68020/68881) (bare machine, using ARTK Version 5.3)	Motorola MVME135-1
*Validated by Registration Alsys AlsyCOMP_011, Version 5.3 (BASE #901127A1.11069)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 4000, VAX 6000, VAX 8000 & VAX 9000 Series of computers (as supported) (under VMS 5.2, 5.3 & 5.4)	Motorola MVME101 (68000), MVME121 (68010), MVME135-1 (68020/68881) & MVME147-1 (68030/68882) (bare machines, using ARTK 5.3)
Alsys AlsyCOMP_034, Version 5.1 (#901221W1.11103)	Multitech 1100 (under SCO Unix 3.2)	Same as Host
*Validated by Registration Alsys AlsyCOMP_034, Version 5.1 (BASE #901221W1.11103)	Any Computer System comprising: cpu: Intel 80386 or 80486; fpu: optional (under a Unix 3.2-based OS)	Each Host, self-targetted
*Validated by Registration Alsys AlsyCOMP_034, Version 5.1 (BASE #901221W1.11103)	Everex AGI 3000D, Compaq Deskpro 386 & SAI Technologies Army Lightweight Computer Unit (LCU V2) (under Interactive Unix 3.2)	Each Host, self-targetted
*Validated by Registration Alsys AlsyCOMP_034, Version 5.1 (BASE #901221W1.11103)	Prime MBX (under Prime Unix V.4)	Same as Host
Alsys AlsyCOMP_043, Version 5.3 (#901221W1.11104)	Apple Macintosh IIcx (under Macintosh System Software 6.0.5)	Same as Host

Ada PROCESSORS *Continued*

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
Alsys AlsyCOMP_034 Version 5.1 (#910129W1.11113)	IBM PS/2 Model 80 (under LynxOS Version 2.0 + Threads Release 11)	Same as Host
*Validated by Registration Alsys AlsyCOMP_034, Version 5.1 (BASE #910129W1.11113)	IBM PS/2 Models 70-xxx & 80-xxx (under LynxOS Version 2.0 Release 15)	Any Host
Alsys AlsyCOMP_056, Version 1.82 (#910131I1.11127)	Sun 3/60 (under SunOS, Version 4.0.3)	KWS EB68020 (under OS-9/68020, Version 2.3)
Alsys AlsyCOMP_055, Version 1.82 (#910201I1.11128)	VAX 8530 (under VMS, Version 5.3-1)	KWS EB68020 (under OS-9/68020, Version 2.3)
Alsys AlsyCOMP_029, Version 5.3 (#910323W1.11131)	CompuAdd 325 (under DOS 3.31)	Intel iSBC 386/116 (bare machine, using ARTK 5.3)
Alsys AlsyCOMP_030, Version 5.3 (#910323W1.11132)	MicroVAX II (under VMS 5.2)	Intel ISBC 386/31 (bare machine, using ARTK 5.3)
Alsys AlsyCOMP_033, Version 5.3 (#910323W1.11133)	Sun 3/140 (under SunOS 4.1)	Intel iSBC 386/12 (bare machine, using ARTK 5.3)
Alsys AlsyCOMP_049, Version 1.83 (#910407I1.11144)	VAX 8530 (under VMS Version 5.3-1)	Integrated Device Technology IDT7RS301 System (R3000/R3010) (bare machine)
*Validated by Registration Alsys AlsyCOMP_049, Version 1.83-01 (BASE #910407I1.11144)	VAX 8530 (under VMS 5.3-1)	Lockheed Sanders STAR MVP (R3000/R3010) (bare machine)
Alsys AlsyCOMP_057, Version 1.83 (#910625I1.11193)	DECstation 3100 (under ULTRIX Version 4.0)	Same as Host
Alsys AlsyCOMP_024, Version 5.3 (#910809W1.11195)	IBM RISC System 6000, model 520 (under AIX v3.1)	Same as Host
Alsys AlsyCOMP_058, Version 5.3 (#910809W1.11196)	Unisys B39 (under BTOS II, v3.2.0)	Same as Host
Alsys AlsyCOMP_040, Version 5.3 (#910809W1.11197)	HP Vectra RS/25C (under DOS 3.30)	Unisys B39 (under BTOS II, v3.2.0)

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
Alsys AlsyCOMP_047 Version 5.37 (#911119A1.11231)	Sun SPARCstation 2 (under SunOS 4.1.1)	Same as Host
*Validated by Registration Alsys AlsyCOMP_047, Version 5.37 (BASE #911119A1.11231)	Sun SPARCstation ELC, IPC & IPX; SPARCserver 330, 370, 390, 470, 490, 630MP, 670MP & 690MP (under SunOS 4.1.1)	Any Host
*Validated by Registration Alsys AlsyCOMP_047, Version 5.37 (BASE #911119A1.11231)	Solbourne Series 5/500, /530, /600, /670, /800 & 5E/900; and S4000 (under OS/MP 4.1)	Any Host
Alsys / German MoD NATO SWG on APSE Compiler for Sun3/SunOS, Version S3C1.82-02 (#911016I1.11233)	Sun-3/60 (under SunOS Version 4.0.3, with CAIS Version 5.5D)	Sun-3/60 (under SunOS Version 4.0.3)
Alsys / German MoD NATO SWG on APSE Compiler for VAX/VMS, Version VC1.82-02 (#911118I1.11236)	VAX 8350 (under VMS Version 5.4-1, with CAIS Version 5.5E)	VAX 8350 (under VMS Version 5.4-1)
ATLAS ELEKTRONIK GmbH ATLAS ELEKTRONIK Ada Compiler VVME 1.82 (#910324I1.11136)	VAX 6000-410 (under VMS Version 5.2)	ATLAS ELEKTRONIK GmbH MPR 2300 (under MOS 2300, Version 2.1)
Concurrent Computer Corporation C3Ada, Version 0.5 (#900427I1.11008)	Concurrent Computer Corporation 8400 (MIPS R3000/3010) (under RTU Version 5.1)	Same as Host
*Validated by Registration Concurrent Computer Corporation C3Ada, Version 0.5 (BASE #900427I1.11008)	Concurrent Computer Corporation 8500 (MIPS R3000/R3010) (under RTU Version 5.1)	Same as Host
Concurrent Computer Corporation C3 Ada Version 1.1v (#901130W1.11107)	Concurrent Computer Corporation 6650 with Super Lightning Floating Point (under RTU Version 5.0C)	Same as Host
*Validated by Registration Concurrent Computer Corporation C3 Ada, Version 1.1 (BASE #901130W1.11107)	Concurrent Computer Corporation Series 6000 (MC68030, with Super Lightning Floating Point) & Series 5000 (MC68020, with Lightning Floating Point) (under RTU Versions 5.0A, 5.0B, 5.0C & 6.0)	Same as Host

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
*Validated by Registration Concurrent Computer Corporation C3 Ada, Version 1.1v (BASE #901130W1.11107)	Concurrent Computer Corporation Series 6000 with Super Lightning Floating Point, and Series 5000 with Lightning Floating Point (all models) (under RTU Version 5.0A, 5.0B & 5.0C)	Any Host
Concurrent Computer Corporation C3 Ada Version R03-00V (#901130W1.11108)	Concurrent Computer Corporation 3280MPS (under OS/32 Version R08-03.2)	Same as Host
*Validated by Registration Concurrent Computer Corporation C3 Ada, Version R03-00V (BASE #901130W1.11108)	Concurrent Computer Corporation Series 3200: 3200 MPS, 3203, 3205, 3210, 3220, 3230, 3250, 3230XP, 3250XP, 3230MPS, 3260MPS, Micro4, and Micro5 (under OS/32 Versions R08-03, R08-03.1 & R08-03.2)	Any Host
Concurrent Computer Corporation C3 Ada Version 1.0v (#901130W1.11109)	Concurrent Computer Corporation 8400 (MIPS R3000/3010) (under RTU Version 5.1)	Same as Host
*Validated by Registration Concurrent Computer Corporation C3 Ada, Version 1.0 (BASE #901130W1.11109)	Concurrent Computer Corporation Series 8000 (MIPS R3000/3010) (under RTU Versions 5.1A, 5.1B & 6.0)	Same as Host
*Validated by Registration Concurrent Computer Corporation C3 Ada, Version 1.0v (BASE #901130W1.11109)	Concurrent Computer Corporation Series 8000 (all models) (under RTU Versions 5.1, 5.1A & 5.1B)	Any Host
*Validated by Registration Concurrent Computer Corporation C3 Ada, Version 2.0p (BASE #901130W1.11109)	Concurrent Computer Corporation Series 8000 (R3000/3010), all models (under RTU Versions 5.1A, 5.1B & 6.0)	Same as Host
Concurrent Computer Corporation C3 Ada Version 1.1v (#901130W1.11110)	Concurrent Computer Corporation 6650 with MC68882 Floating Point (under RTU Version 5.0C)	Same as Host

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
*Validated by Registration Concurrent Computer Corporation C3 Ada, Version 1.1 (BASE #901130W1.11110)	Concurrent Computer Corporation Series 6000 (MC68030/MC68882) & Series 5000 (MC68020/MC68881) (under RTU Versions 5.0A, 5.0B, 5.0C & 6.0)	Same as Host
*Validated by Registration Concurrent Computer Corporation C3 Ada, Version 1.1v (BASE #901130W1.11110)	Concurrent Computer Corporation Series 6000 with an MC68882 fpu, and Series 5000 with an MC68881 fpu (all models) (under RTU Versions 5.0A, 5.0B & 5.0C)	Any Host
*Validated by Registration Concurrent Computer Corporation C3 Ada, Version 1.2 (BASE #901130W1.11110)	Concurrent Computer Corporation Series 7000 (MC68040) (under RTU Version 6.1)	Any Host
CONVEX Computer Corporation CONVEX Ada, Version 2.0 (#900910W1.11027)	CONVEX C220 (under ConvexOS 8.1)	Same as Host
*Validated by Registration CONVEX Computer Corporation CONVEX Ada, Version 2.0 (BASE #900910W1.11027)	CONVEX C120, C201, C202, C210, C220, C230, C240, C210i, C220i & C230i (under ConvexOS, Versions 8.1 and 9.0)	Any Host
*Validated by Registration CONVEX Computer Corporation CONVEX Ada, Version 2.0 (BASE #900910W1.11027)	CONVEX C120, C201, C202, C210, C210i, C220, C220i, C230, C230i, C240, C3210, C3220, C3230, C3240, C3410, C3420, C3430, C3440, C3450, C3460, C3470, C3480, C3810, C3820, C3830, C3840, C3850, C3860, C3870, C3880 (under ConvexOS versions 8.1, 9.0, 9.1 & 10.0)	Each Host, self-targetted
*Validated by Registration CONVEX Computer Corporation CONVEX Ada, Version 2.0 (BASE #900910W1.11027)	CONVEX C120, C201, C202, C210, C220, C230, C240, C210i, C220i & C230i (under ConvexOS, Versions 8.1 and 9.0)	Any Host
Cray Research, Inc. Cray Ada Compiler Release 2.0 (#901112W1.11116)	Cray X-MP/EA (under UNICOS Release 5.0)	Same as Host

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
*Validated by Registration Cray Research, Inc. Cray Ada Compiler Release 2.0 (BASE #901112W1.11116)	CRAY X-MP & X-MP/EA, all models (under UNICOS Releases 5.1, 6.0 & 6.1)	Each Host, self-targeted
Cray Research, Inc. Cray Ada Compiler Release 2.0 (#901112W1.11117)	Cray Y-MP (under UNICOS Release 5.0)	Same as Host
*Validated by Registration Cray Research, Inc. Cray Ada Compiler Release 2.0 (BASE #901112W1.11117)	Cray Y-MP, all models (under UNICOS Releases 5.1, 6.0 & 6.1)	Same as Host
Cray Research, Inc. Cray Ada Compiler Release 2.0 (#911006W1.11223)	CRAY-2/4-128 (under UNICOS Release 6.1)	Same as Host
*Validated by Registration Cray Research, Inc. Cray Ada Compiler Release 2.0 (BASE #911006W1.11223)	CRAY-2 (all models) (under UNICOS Release 6.1)	Any Host
DDC International A/S DACS VAX/VMS to 80386 PM Bare Ada Cross Compiler System, Version 4.6 (#901129S1.11074)	VAX 8530 (under VMS Version 5.3)	Intel iSBC 386/21 (bare machine)
DDC International A/S DACS 80386 UNIX V Ada Compiler System, Version 4.6 (#901129S1.11075)	ICL DRS300 (under DRS/NX, Version 3.2 (UNIX System V/386 release 3.2))	Same as Host
DDC International A/S DACS Sun3/SunOS Native Ada Compiler System, Version 4.6 (#901129S1.11076)	Sun-3/60 (under SunOS, Version 4.0_Export)	Same as Host
DDC International A/S DACS VAX/VMS to 80186 Bare Ada Cross Compiler System with Rate Monotonic Scheduling, Version 4.6 (#901129S1.11077)	VAX 8530 (under VMS Version 5.3)	Intel iSBC 186/03 (bare machine)
*Validated by Registration DDC International A/S DACS VAX/VMS to 80186 Bare Ada Cross Compiler System with Rate Monotonic Scheduling, Version 4.6 (BASE #901129S1.11077)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 6000, VAX 8000 & VAX 9000 Series of computers, including Raytheon Military VAX computer model 860 (under VMS Version 5.3)	Intel iSBC 186/03 (bare machine)

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
*Validated by Registration DDC International A/S DACS VAX/VMS to 80286 Bare Ada Cross Compiler System with Rate Monotonic Scheduling, Version 4.6 (BASE #901129S1.11077)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 6000, VAX 8000 & VAX 9000 Series of computers, including Raytheon Military VAX computer model 860 (under VMS Version 5.3)	Intel iSBC 286/12 (bare machine)
*Validated by Registration DDC International A/S DACS VAX/VMS to 80286 PM Bare Ada Cross Compiler System with Rate Monotonic Scheduling, Version 4.6 (BASE #901129S1.11077)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 6000, VAX 8000 & VAX 9000 Series of computers, including Raytheon Military VAX computer model 860 (under VMS Version 5.3)	Intel iSBC 286/12 in Protected Mode (bare machine)
*Validated by Registration DDC International A/S DACS VAX/VMS to 8086 Bare Ada Cross Compiler System with Rate Monotonic Scheduling, Version 4.6 (BASE #901129S1.11077)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 6000, VAX 8000 & VAX 9000 Series of computers, including Raytheon Military VAX computer model 860 (under VMS Version 5.3)	Intel iSBC 86/35 (bare machine)
DDC International A/S DACS VAX/VMS to 80386 Bare Ada Cross Compiler System with Rate Monotonic Scheduling, Version 4.6 (#901129S1.11078)	VAX 8530 (under VMS Version 5.3)	Intel iSBC 386/21 (bare machine)
DDC International A/S DACS VAX/VMS to 80186 Bare Ada Cross Compiler System, Version 4.6 (#901129S1.11079)	VAX 8530 (under VMS Version 5.3)	Intel iSBC 186/03 (bare machine)
*Validated by Registration DDC International A/S DACS VAX/VMS to 80186 Bare Ada Cross Compiler System, Version 4.6 (BASE #901129S1.11079)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 6000, VAX 8000 & VAX 9000 Series of computers, including Raytheon Military VAX computer model 860 (under VMS Version 5.3)	Intel iSBC 186/03 (bare machine)
*Validated by Registration DDC International A/S DACS VAX/VMS to 80286 Bare Ada Cross Compiler System, Version 4.6 (BASE #901129S1.11079)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 6000, VAX 8000 & VAX 9000 Series of computers, including Raytheon Military VAX computer model 860 (under VMS Version 5.3)	Intel iSBC 286/12 (bare machine)

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
*Validated by Registration DDC International A/S DACS VAX/VMS to 80286 PM Bare Ada Cross Compiler System, Version 4.6 (BASE #901129S1.11079)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 6000, VAX 8000 & VAX 9000 Series of computers, including Raytheon Military VAX computer model 860 (under VMS Version 5.3)	Intel iSBC 286/12 in Protected Mode (bare machine)
*Validated by Registration DDC International A/S DACS VAX/VMS to 8086 Bare Ada Cross Compiler System, Version 4.6 (BASE #901129S1.11079)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 6000, VAX 8000 & VAX 9000 Series of computers, including Raytheon Military VAX computer model 860 (under VMS Version 5.3)	Intel iSBC 86/35 (bare machine)
DDC International A/S DACS 80386 DMS/OS Ada Compiler System, Version 4.6 (#901129S1.11112)	IBM PS/2 Model 80-311 (under LynxOS 386/PS2, Version 2.0A)	Same as Host
DDC International A/S DACS VAX/VMS to 80860 Bare Ada Cross Compiler System, Version 4.6.1 (#910502S1.11158)	VAX 8530 (under VMS Version 5.3)	Tadpole Technology plc TP860M (bare machine)
DDC International A/S DACS Sun-3/SunOS to 68030 Bare Ada Cross Compiler System, Version 4.6.4, MRI IEEE 695 (BASIC_MODE) (#910502S1.11159)	Sun-3/50 (under SunOS Release 4.0_Export)	Motorola MVME143 board (68030/68882) (bare machine)
DDC International A/S DACS Sun-3/SunOS to 68030 Bare Ada Cross Compiler System, Version 4.6.4, MRI IEEE 695 (SECURE_MODE) (#910502S1.11160)	Sun-3/50 (under SunOS Release 4.0_Export)	Motorola MVME143 board (68030/68882) (bare machine)
DDC-I International A/S DACS VAX/VMS Native Ada Compiler System, Version 4.6 (#901129S1.11050)	VAX 8530 (under VMS Version 5.3)	Same as Host
DDC-I International A/S DACS VAX/VMS to 68020 Bare Cross Compiler System, Version 4.6 (#901129S1.11051)	MicroVAX 3100 (under VMS Version 5.3)	Motorola MVME133 board (68020/68881) (bare machine)
*Validated by Registration DDC-I, Inc. DACS VAX/VMS to 80486 PM Bare Ada Cross Compiler System, Version 4.6 (BASE #901129S1.11074)	VAX 8530 (under VMS Version 5.3)	Intel iSBC 486/125 (bare machine)

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
DDC-Inter, Inc. InterACT Ada 1750A Compiler System, Release 3.5 (#910705S1.11191)	MicroVAX 3100 Cluster (under VMS 5.2)	InterACT MIL-STD-1750A Instruction Set Architecture Simulator Release 2.3 (bare machine simulation)
DDC-Inter, Inc. InterACT Ada MIPS Cross-Compiler System, Release 2.0 (#910705S1.11192)	MicroVAX 3100 Cluster (under VMS 5.2)	Lockheed Sanders STAR MVP R3000/R3010 Board (bare machine)
*Validated by Registration DDC-Inter, Inc. InterACT Ada MIPS Cross-Compiler System, Release 2.1 (BASE #910705S1.11192)	MicroVAX 3100 Cluster (under VMS 5.2)	Lockheed Sanders STAR MVP R3000/R3010 Board (bare machine)
Digital Equipment Corporation VAX Ada, Version 2.2 (#901109S1.11053)	VAX 8800 (under VMS Version 5.4)	Same as Host
*Validated by Registration Digital Equipment Corporation VAX Ada Version 2.2 (BASE #901109S1.11053)	DEC VAX-11, VAXserver, VAXstation, VAXft, MicroVAX, VAX 4000, VAX 6000, VAX 8000 & VAX 9000 Series of computers (as supported); Ratheon Military VAX Computer Model 860; and Norden MilVAX Computer Model MilVAX II (under VMS Version 5.4)	Any Host
Digital Equipment Corporation VAX Ada, Version 2.2 (#901109S1.11054)	VAX 8800 (under VMS Version 5.4)	MicroVAX II (under VAXELN Version 4.1, using VAXELN Ada Version 2.2)
*Validated by Registration Digital Equipment Corporation VAX Ada Version 2.2 (BASE #901109S1.11054)	DEC VAX-11, VAXserver, VAXstation, VAXft, MicroVAX, VAX 4000, VAX 6000, VAX 8000 & VAX 9000 Series of computers (as supported); Ratheon Military VAX Computer Model 860; and Norden MilVAX Computer Model MilVAX II (under VMS Version 5.4)	VAX 4000 Models 200 & 300; VAX 6000 Series 200, 300 & 400; VAX 8200, 8250, 8500, 8530, 8550, 8700, 8800 & 8810; VAX-11/730 & /750; MicroVAX II, 2000, 3100, 3300, 3400, 3500, 3600, 3800 & 3900; VAXstation 2000, 3100, 3150, 3200, 3500 & II/GPX; VAXserver 3100, 3300, 3400, 3500, 3600, 3800, 3900; VAXserver 4000-300; VAXserver 6000 Models 210, 220, 310, 320, 410 & 420; Ratheon Military VAX Computer Models 810 & 860; Norden MilVAX Computer Model MilVAX II, IVAX 620 & 630; VAX RTA; KA620-BA & KA800-M; rtVAX 300, 1000, 3200, 3300, 3305, 3400, 3500, 3600, 3800, 4000 Model 300, 8550, 8700, rtVAX 6000 Models 200, 300 & 400 Series and rtVAXstation 3100 Models 30 & 38 (under VAXELN Version 4.2, using VAXELN Ada Version 2.2)

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
*Validated by Registration Digital Equipment Corporation VAX Ada Version 2.2 (BASE #901109S1.11054)	VAX 6000 Model 200, 300 & 400 Series; VAX 8200, 8250, 8300, 8350, 8500, 8530, 8550, 8600, 8650, 8700, 8800, 8810, 8820, 8830, 8840, 8842, 8974 & 8978; VAX-11/730, /750, /780, /785; MicroVAX II, 2000, 3100, 3300, 3400, 3500, 3600, 3800 & 3900; VAXstation II, 2000, 3100 series, 3200, 3500, 3520, 3540 & 8000; VAXserver 3100, 3300, 3400, 3500, 3600, 3602, 3800, 3900; VAXserver 6000-310, 6000-410 & 6000-420; Ratheon Military VAX Computer Model 860 (under VMS Version 5.4)	VAX 6000 Model 200, 300 & 400 Series; VAX 8200, 8250, 8500, 8530, 8550, 8700, 8800 & 8810; VAX-11/730 & /750; MicroVAX II, 2000, 3100, 3300, 3400, 3500, 3600, 3800 & 3900; VAXstation 2000, 3100, 3150, 3200, 3500 & II/GPX; VAXserver 3100, 3300, 3400, 3500, 3600, 3602, 3800, 3900; VAXserver 6000 Models 210 220, 310, 320, 410 & 420; Ratheon Military VAX Computer Models 810 & 860; Norden Systems: Mil Vax II, IVAX 620 & 630; VAX RTA; KA620-BA, rtVAX 300, 1000, 3200, 3300, 3305, 3400, 3500, 3600, 3800, 8550, 8700, rtVAX 6000 Model 200, 300 & 400 Series & rtVAXstation 3100 Models 30 & 38 (under VAXELN Version 4.1 using VAXELN Ada Version 2.2)
Digital Equipment Corporation DEC Ada, Version 1.0 (#911025S1.11226)	DECstation 5000 Model 200 (under ULTRIX 4.2)	Same as Host
*Validated by Registration Digital Equipment Corporation DEC Ada, Version 1.0 (BASE #911025S1.11226)	DECstation 2100, 3100, 3100s, 5000 Models 120/125, 120/125CX, 120/125PXG, 120/125PXG TURBO, 200, 200CX, 200PX, 200PXG, 200PXG TURBO; and DECsystem 3100, 5000 Model 200, 5100, 5400, 5500, 5810, 5820, 5830 & 5840 (under ULTRIX Versions 4.0, 4.1 & 4.2)	Any Host
*Validated by Registration Digital Equipment Corporation DEC Ada, Version 1.0 (BASE #911025S1.11226)	DEC DECstation 2100, 3100, & 5000, and DECsystem 5000, 5100, 5400, 5500, 5800, & 5900 series of computers (under ULTRIX Versions 4.0, 4.1, 4.2, & 4.2A)	Any Host
E-Systems/ECI Division Tolerant Ada Development System, Version 6.0 (#901003W1.11039)	Tolerant Eternity (under TX, 5.4.0)	Same as Host
Encore Computer Corporation Parallel Ada Development System, Revision 1.0 (#910130W1.11114)	Encore 91 Series Model 91-0340 (under UMAX 3.0)	Same as Host
*Validated by Registration Encore Computer Corporation Parallel Ada Development System, Revision 1.0 (BASE #910130W1.11114)	Encore 91 Series, all models (under UMAX 3.0)	Any Host

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
Encore Computer Corporation Parallel Ada Development System, Revision 1.0 (#910130W1.11115)	Encore 91 Series Model 91-0340 (under UMAX 3.0)	Encore 91 Series Model 91-0430 (under uMPX 1.0)
*Validated by Registration Encore Computer Corporation Parallel Ada Development System, Revision 1.0 (BASE #910130W1.11115)	Encore 91 Series, all models (under UMAX 3.0)	Encore 91 Series, all models (under microMPX 1.0)
GSE Gesellschaft fur Software-Engineering mbH Meridian Ada, Version 4.1 (#910711W1.11180)	MIPS M/120 RISComputer (under UMIPS 4.51)	Same as Host
GSE Gesellschaft fur Software-Engineering mbH Meridian Ada, Version 4.1 (#910711W1.11182)	IBM RISC System 6000/520 (under AIX Version 3)	Same as Host
GSE Gesellschaft fur Software-Engineering mbH Meridian Ada, Version 4.1 (#910711W1.11184)	HP 9000 Series 400 Model 400T (under HP-UX 7.03)	Same as Host
GSE Gesellschaft fur Software-Engineering mbH Meridian Ada, Version 4.1 (#910711W1.11186)	Concurrent Computer Corporation M6000 Model 6450 (under RTU 5.0C)	Same as Host
GSE Gesellschaft fur Software-Engineering mbH Meridian Ada, Version 4.1 (#910711W1.11187)	Concurrent Computer Corporation M8000 Model 8500 (under RTU 5.1A)	Same as Host
GSE Gesellschaft fur Software-Engineering mbH Meridian Ada, Version 4.1 (#910711W1.11188)	Data General AViiON 400 model 402 (under DG/UX 4.31)	Same as Host
GSE Gesellschaft fur Software-Engineering mbH Meridian Ada, Version 4.1 (#910711W1.11190)	HP 9000 Series 700 Model 720 (under HP-UX 8.01)	Same as Host
Harris Corporation, Computer Systems Division Harris Ada 5.1 (#900918W1.11028)	Harris NH-4400 (under CX/UX 5.1)	Same as Host
*Validated by Registration Harris Corporation, Computer Systems Division Harris Ada 5.1 (BASE #900918W1.11028)	Harris NH-4400 (under CX/UX 5.1, CX/RT 5.1, OR CX/SX 5.1)	Any Host

Ada PROCESSORS *Continued*

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
*Validated by Registration Harris Corporation, Computer Systems Division Harris Ada 5.1.1 (BASE #900918W1.11028)	Harris NH-4400 & NH-4800 (under CX/UX 5.3, CX/RT 5.3 & CX/SX 5.3)	Any Host (using either Harris Ada Run-time System or ARMS Run-time System)
*Validated by Registration Harris Corporation, Computer Systems Division Harris Ada Compiler, Version 5.1 (BASE #900918W1.11028)	Harris NH-4400 (under CX/UX 5.2, CX/RT 5.2 & CX/SX 5.2)	Same as Host
Harris Corporation, Computer Systems Division Harris Ada 5.1 (#900918W1.11029)	Harris NH-3800 (under CX/UX 5.1)	Same as Host
*Validated by Registration Harris Corporation, Computer Systems Division Harris Ada 5.1 (BASE #900918W1.11029)	Harris NH-1200, NH-3400 & NH-3800 (under CX/UX 5.1, CX/RT 5.1, OR CX/SX 5.1)	Any Host
*Validated by Registration Harris Corporation, Computer Systems Division Harris Ada 5.1.1 (BASE #900918W1.11029)	Harris NH-1200, NH-3400 & NH-3800 (under CX/UX 5.3, CX/RT 5.3 & CX/SX 5.3)	Any Host
*Validated by Registration Harris Corporation, Computer Systems Division Harris Ada Compiler, Version 5.1 (BASE #900918W1.11029)	NH-1200, NH-3400 & NH-3800 (under CX/UX 5.2, CX/RT 5.2 & CX/SX 5.2)	Same as Host
Hewlett-Packard Co./Apollo Systems Division Domain Ada V6.0m (#910411W1.11137)	DN4500 (under Domain/OS SR10.3)	Same as Host
Hewlett-Packard Co./Apollo Systems Division Domain Ada V6.0p (#910411W1.11138)	DN10000 (under Domain/OS SR10.3.p)	Same as Host
Hewlett-Packard Company HP 9000 Series 300 Ada Compiler, Version 5.35 (#901022W1.11049)	HP 9000 Series 300 Model 370 (under HP-UX, Version A.07.00)	Same as Host
*Validated by Registration Hewlett-Packard Company HP 9000 Series 300 Ada Compiler, Version 5.35 (BASE #901022W1.11049)	HP 9000 Series 300 & 400, all models (under HP-UX, Version A.B7.03)	Any Host

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
*Validated by Registration Hewlett-Packard Company HP 9000 Series 300 Ada Compiler, Version 5.35t (BASE #901022W1.11049)	HP 9000 Series 300 & 400, all Models (under HP-UX, Versions A.B7.00 (release 7.0), A.B7.03 (release 7.3), A.B7.05 (release 7.5) & A.B8.00 (release 8.0), as supported)	Any Host from the same Series, under the same OS version
Hewlett-Packard Company HP 9000 Series 700/800 Ada Compiler, Version 5.35 (#911107W1.11227)	HP 9000 Series 700 Model 720 (under HP-UX, Version A.B8.05 (release 8.05))	Same as Host
Hewlett-Packard Company HP 9000 Series 700/800 Ada Compiler, Version 5.35 (#911107W1.11228)	HP 9000 Series 800 Model 835 (under HP-UX, Version A.B8.00 (release 8.00))	Same as Host
IBM Canada, Ltd. AIX Ada/6000 Release 2, Preliminary Version (#901127W1.11085)	RISC System/6000 model 7013-530 (under AIX 3.1)	Same as Host
*Validated by Registration IBM Canada, Ltd. AIX Ada/6000 Release 2.2 (BASE #901127W1.11085)	RISC System/6000 models 7013-320, -520, -530, -540, -550, -730, & -930 (under AIX 3.1 & 3.2)	Any Host, running same AIX version as Host
IBM Canada, Ltd. AIX Ada/6000 Internal Development Version (#920121W1.11234)	RISC System/6000 model 7012-320 (under AIX 3.2)	Same as Host
InterACT Corporation InterACT Ada 1750A Compiler System, Release 3.5 (#910705S1.11191)	MicroVAX 3100 Cluster (under VMS 5.2)	InterACT MIL-STD-1750A Instruction Set Architecture Simulator Release 2.3 (bare machine simulation)
InterACT Corporation InterACT Ada MIPS Cross-Compiler System, Release 2.0 (#910705S1.11192)	MicroVAX 3100 Cluster (under VMS 5.2) machine)	Lockheed Sanders STAR MVP R3000/R3010 Board (bare
*Validated by Registration InterACT Corporation InterACT Ada MIPS Cross-Compiler System, Release 2.1 (BASE #910705S1.11192)	MicroVAX 3100 Cluster (under VMS 5.2) machine)	Lockheed Sanders STAR MVP R3000/R3010 Board (bare
Intermetrics, Inc. UTS Ada Compiler, Version 302.03 (#910425W1.11141)	IBM 3083 (under UTS 580 Release 1.2.3)	Same as Host

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
Intermetrics, Inc. Intermetrics MVS Ada Compiler, Version 7.0 (#910622W1.11170)	Amdahl 5890/180E (under MVS/XA Release 2.2)	Same as Host
International Business Machines Corporation IBM Ada/370, Version 1.1.0 (BASE #901128W1.11091)	IBM 3084 (under VM/ESA Release 1.0 370 Feature)	Same as Host
*Validated by Registration International Business Machines Corporation IBM Ada/370, Version 1.1.0 (BASE #901128W1.11091)	IBM 3084 (under VM/ESA Release 1.0 370 Feature)	Same as Host
*Validated by Registration International Business Machines Corporation IBM Ada/370, Version 1.1.0 (BASE #901128W1.11091)	IBM 3090 (under VM/ESA Release 1.0 ESA Feature)	Same as Host
*Validated by Registration International Business Machines Corporation IBM Ada/370, Version 1.1.0 (BASE #901128W1.11091)	IBM 3090 (under VM/SP Release 6.0 HPO 60)	Same as Host
*Validated by Registration International Business Machines Corporation IBM Ada/370, Version 1.1.0 (BASE #901128W1.11091)	IBM 3090 (under VM/XA Release 2.1)	Same as Host
*Validated by Registration International Business Machines Corporation IBM Ada/370, Version 1.1.0 (BASE #901128W1.11091)	IBM 3090 (under VM/SP Release 6.0 HPO 60)	Same as Host
International Business Machines Corporation IBM Ada/370, Version 1.1.0 (#901128W1.11092)	IBM 4381 (under MVS/XA Release 3.8)	Same as Host
*Validated by Registration International Business Machines Corporation IBM Ada/370, Version 1.1.0 (BASE #901128W1.11092)	IBM 3090 (under MVS/ESA Release 4.1)	Same as Host
International Business Machines Corporation IBM Ada/370, Version 1.1.0 (#901128W1.11092)	IBM 4381 (under MVS/XA Release 3.8)	Same as Host

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
International Business Machines Corporation IBM Ada/370, Version 1.2.0 (optimized) (#910612W1.11166)	IBM 3083 (under VM/SP HPO Release 5.0)	Same as Host
International Business Machines Corporation IBM Ada/370, Version 1.2.0 (optimized) (#910612W1.11167)	IBM 4381 (under MVS/ESA Release 3.1)	Same as Host
International Business Machines Corporation IBM Ada/370, Version 1.2.0 (unoptimized) (#910612W1.11168)	IBM 3083 (under VM/SP HPO Release 5.0)	Same as Host
*Validated by Registration International Business Machines Corporation IBM Ada/370, Version 1.2.0 (BASE #910612W1.11168)	IBM 3084 (under VM/ESA 1.1.0 (370 Feature))	IBM 937x, 43xx, 308x, 3090 & ES/9000 processors (under VM/ESA 1.1.0 (370 Feature)))
*Validated by Registration International Business Machines Corporation IBM Ada/370, Version 1.2.0 (BASE #910612W1.11168)	IBM 3090 (under VM/ESA 1.1.0 (ESA Feature))	IBM 937x, 43xx, 308x, 3090 & ES/9000 processors (under VM/ESA 1.1.0 (ESA Feature))
*Validated by Registration International Business Machines Corporation IBM Ada/370, Version 1.2.0 (BASE #910612W1.11168)	IBM 3090 (under VM/ESA 1.1.1)	IBM 937x, 43xx, 308x, 3090 & ES/9000 processors (under VM/ESA 1.1.1)
*Validated by Registration International Business Machines Corporation IBM Ada/370, Version 1.2.0 (BASE #910612W1.11168)	IBM 3090 (under VM/SP HPO 6.0)	IBM 937x, 43xx, 308x, 3090 & ES/9000 processors (under VM/SP HPO 6.0)
International Business Machines Corporation IBM Ada/370, Version 1.2.0 (unoptimized) (#910612W1.11169)	IBM 4381 (under MVS/ESA Release 3.1)	Same as Host
*Validated by Registration International Business Machines Corporation IBM Ada/370, Version 1.2.0 (BASE #910612W1.11169)	IBM 3090 (under MVS/SP XA 2.2)	IBM 937x, 43xx, 308x, 3090 & EX/9000 processors (under MVS/SP XA 2.2)

Ada PROCESSORS *Continued*

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
*Validated by Registration International Business Machines Corporation IBM Ada/370, Version 1.2.0 (BASE #910612W1.11169)	IBM 3090 (under MVS/ESA Release 4.1.0)	IBM 937x, 43xx, 308x, 3090 & ES/9000 processors (MVS/ESA Release 4.1.0)
*Validated by Registration International Business Machines Corporation IBM Ada/370, Version 1.2.0 (BASE #910612W1.11169)	IBM 3090 (under MVS/ESA Release 4.2.0)	IBM 937x, 43xx, 308x, 3090 & ES/9000 processors (MVS/ESA Release 4.2.0)
International Computers Limited VME Ada Compiler VA3,00 (#911003N1.11222)	ICL Series 39 Level 80 (under VME with VMEB Environment Option Version SV291)	Same as Host
Irvine Compiler Corporation ICC Ada v7.0.0 (#910510W1.11145)	HP 9000 Model 720 (under HP-UX Release 8.01)	Same as Host
Irvine Compiler Corporation ICC Ada v7.0.0 (#910510W1.11146)	Sun 3/50 (under SunOS V4.0)	Same as Host
Irvine Compiler Corporation ICC Ada v7.0.0 (#910510W1.11147)	HP 9000 Model 400 (under HP-UX Release 7.03)	Same as Host
Irvine Compiler Corporation ICC Ada v7.0.0 (#910510W1.11148)	VAXstation 3100 Model M38 (under VMS 5.3-1)	Intel i80960MC (bare machine)
KRUPP ATLAS ELEKTRONIK GmbH KRUPP ATLAS ELEKTRONIK Ada Compiler VVME 1.82 (#910324I1.11136)	VAX 6000-410 (under VMS Version 5.2) Version 2.1)	KRUPP ATLAS ELEKTRONIK GmbH MPR 2300 (under MOS2300,
Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (#900909W1.11031)	Sun-3/260 (under SunOS, Version 4.1)	Same as Host
Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (#900909W1.11032)	Sun-4/110 (under SunOS, Version 4.1)	Same as Host
*Validated by Registration Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (BASE #900909W1.11032)	Sun Microsystems Sun-4, SPARCserver & SPARCstation computer families (under SunOS Versions 4.1 & 4.1.1)	Any Host

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (#900909W1.11033)	DECstation 3100 (under Ultrix, Version 3.0)	Same as Host
*Validated by Registration Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (BASE #900909W1.11033)	DECstation 2100, 3100 & 5000 (under Ultrix 3.0)	Any Host
Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (#900909W1.11034)	IBM PS/2 Model 60 (with Floating-Point Co-Processor) (under IBM PC-DOS 3.30)	Same as Host
*Validated by Registration Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (BASE #900909W1.11034)	Any Computer System comprising: cpu: any that executes the Intel 80286, 80386, or 80486 instruction set, fpu: Intel 80287, 80387, or equivalent, as appropriate, memory: 640 KByte RAM minimum, disk: 20 MByte hard drive, OS: IBM PC-DOS 3.30	Any Host
*Validated by Registration Meridian Software Systems, Inc. Meridian Ada, Version 4.1.1 (BASE #900909W1.11034)	Any Computer System Comprising: Cpu: any that executes the Intel 80286, 80386, or 80486 instruction set; Fpu: Intel 80287, 80387, or equivalent, as appropriate; Memory: 640 or greater KByte RAM; Disk: 20 MByte hard drive (under IBM PC-DOS 3.30)	Any Host
Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (#900909W1.11035)	IBM PS/2 Model 30 (with Floating-Point Co-Processor) (under IBM PC-DOS 3.30)	Same as Host
*Validated by Registration Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (BASE #900909W1.11035)	Any Computer System comprising: cpu: any that executes the Intel 8086 instruction set, fpu: Intel 8087 or equivalent, as appropriate, memory: 640 KByte RAM minimum, disk: 20 MByte hard drive, OS: IBM PC-DOS 3.30	Any Host
*Validated by Registration Meridian Software Systems, Inc. Meridian Ada, Version 4.1.1 (BASE #900909W1.11035)	Any Computer System Comprising: Cpu: any that executes the Intel 8086 instruction set; Fpu: Intel 8087 or equivalent, as appropriate; Memory: 640 or greater KByte RAM; Disk: 20 MByte hard drive (under IBM PC-DOS 3.30)	Any Host

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (#900909W1.11036)	ITT XTRA/286 (with Floating-Point Co-Processor) (under MS-DOS 3.20/OS286)	Same as Host
*Validated by Registration Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (BASE #900909W1.11036)	Any Computer System comprising: cpu: any that executes the Intel 80286, 80386, or 80486 instruction set, fpu: Intel 80287, 80387, or equivalent, as appropriate, memory: 1.5 MByte RAM minimum, disk: 20 MByte hard drive, OS: MS-DOS 3.20/OS286	Any Host
*Validated by Registration Meridian Software Systems, Inc. Meridian Ada, Version 4.1.1 (BASE #900909W1.11036)	Any Computer System Comprising: Cpu: any that executes the Intel 80286, 80386, or 80486 Instruction set; Fpu: Intel 80287, 80387, or equivalent, as appropriate; Memory: 1.5 or greater MByte RAM; Disk: 20 MByte hard drive (under MS-DOS 3.30/OS286)	Any Host
Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (#900909W1.11037)	80 Data 386/25 (under 386/ix 1.0.6)	Same as Host
*Validated by Registration Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (BASE #900909W1.11037)	Any Computer System comprising: cpu: any that executes the Intel 80386 or 80486 instruction set, fpu: optional Intel 80387 or equivalent, for 80386 cpu, memory: 2 MByte RAM minimum, disk: 40 MByte hard drive, OS: SCO Unix 3.2 or Interactive 386/ix 1.0.6	Any Host machine running the same OS
*Validated by Registration Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (BASE #900909W1.11037)	Sequent Symmetry 2000/40, /200, /400 & /700 (under DYNIX/ptx V1.2.0)	Any Host
*Validated by Registration Meridian Software Systems, Inc. Meridian Ada, Version 4.1.1 (BASE #900909W1.11037)	Any Computer System Comprising: Cpu: any that executes the Intel 80386 or 80486 Instruction set; Fpu: Intel 80387 or equivalent, for 80386 cpu; Memory: 2 or greater MByte RAM; Disk: 40 MByte hard drive (under SCO Unix 3.2 or INTERACTIVE UNIX System V/386 Release 3.2)	Any Host with the same OS

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (#900909W1.11038)	Apple Macintosh II (under System 6.0.3)	Same as Host
*Validated by Registration Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (BASE #900909W1.11038)	Apple Macintosh SE 30 (under System 6.0.3)	Same as Host
Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (#901108W1.11060)	Apple Macintosh II (under A/UX 2.0)	Same as Host
Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (#901108W1.11061)	Stardent Titan P3 (under Stardent/Unix 3.0)	Same as Host
Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (#901108W1.11062)	MicroVAX 3100 (under Ultrix 3.1)	Same as Host
Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (#901108W1.11063)	MicroVAX II (under VMS 5.2)	Same as Host
Meridian Software Systems, Inc. Meridian Ada, Version 4.1.1 (#911002W1.11218)	IBM PS/2 Model 80 (with Floating Point Co-Processor) (under IBM PC-DOS 3.30/OS386)	Same as Host
Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (#911002W1.11219)	NeXTstation (under System Release 2.0)	Same as Host
Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (#911002W1.11220)	SGI PowerSeries 4D/310S (under IRIX Sys V 3.3.2)	Mercury MC860 VM (under MC/OS, Version 2.0)
*Validated by Registration Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (BASE #911002W1.11220)	SGI PowerSeries 4D/310S (under IRIX Sys V 3.3.2)	Mercury MC860VB & MC860VM (under MC/OS, Version 2.0)

Ada PROCESSORS *Continued*

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
*Validated by Registration Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (BASE #911002W1.11220)	SGI PowerSeries 4D/310S (under IRIX Sys V 3.3.2)	Mercury MC860VS (under MC/OS, Version 2.VS)
Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (#911002W1.11221)	Sun-4/110 (under SunOS, Version 4.1)	Mercury MC860 VM (under MC/OS, Version 2.0)
*Validated by Registration Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (BASE #911002W1.11221)	Sun Microsystems Sun-4/110, /150, /260 & /280; SPARCserver 330, 370, 390, 470 & 490; and SPARCstation 2, IPC & IPX (under SunOS Versions 4.1 & 4.1.1) and SPARCengine 1E (under SunOS Version 4.1e)	Mercury MC860VB & MC860VM (under MC/OS, Version 2.0) and Mercury MC860VS (under MC/OS, Version 2.VS)
Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (#911216W1.11232)	Sequoia Series 400 (under Topix, Version 6.5)	Same as Host
MIPS Computer Systems MIPS ASAPP 3.0 (#900619W1.11010)	MIPS M/2000 (under RISC/os 4.50)	R3200-6 CPU board (bare machine)
MIPS Computer Systems MIPS Ada 3.0 (#900619W1.11011)	MIPS M/2000 (under RISC/os 4.50)	Same as Host
NEC Corporation NEC Ada Compiler System for EWS-UX/V (Release 4.0), Version Release 2.1(4.6) (#910918S1.11216)	NEC EWS4800/220 (under EWS-UX/V (Release 4.0) R2.1)	Same as Host
NEC Corporation NEC Ada Compiler System for EWS-UX/V to V70/RX-UX832, Version 1.0 (#910918S1.11217)	NEC EWS4800/60 (under EWS-UX/V R8.1)	NEC MV4000 (under RX-UX832 V1.6)
North China Institute of Computing Technology C_Ada, Version 1.0 (#910902N1.11198)	MicroVAX II (under ULTRIX 3.0)	Same as Host
R.R. Software, Inc. Janus/Ada 2.2.0 Phar Lap/DOS (#901120W1.11088)	IBM PS/2 Model 80 (under Phar Lap/DOS 3.3)	IBM PS/2 Model 80 (under MS DOS 3.3)
*Validated by Registration R.R. Software, Inc. Janus/Ada 2.2.0 Phar Lap/DOS (BASE #901120W1.11088)	Any Computer System Comprising: cpu: Intel 80386, fpu: optional, memory: 4 MByte RAM, disk: 40 MByte hard drive (under Phar Lap/DOS 3.3)	Any Computer System Comprising: cpu: Intel 80386, fpu: optional, memory: 4 MByte RAM, disk: 40 MByte hard drive (under MS DOS 3.3)

Ada PROCESSORS *Continued*

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
R.R. Software, Inc. Janus/Ada 2.2.0 Unix (#901129W1.11089)	Northgate 386/25 (under SCO Unix 3.2)	Same as Host
*Validated by Registration R.R. Software, Inc. Janus/Ada 2.2.0 UNIX (BASE #901129W1.11089)	Any Computer System Comprising: cpu: Intel 80386, fpu: optional, memory: 4 MByte RAM, disk: 60 MByte hard drive (under Phar Lap/DOS 3.3)	Same as Host
Rational M68020/OS-2000 Cross-Development Facility, Version 7 (#901116W1.11081)	R1000 Series 300 (under Rational Environment Version D_12_24_0)	Phillips PG2100 (OS-2000 Release 2.0)
Rational M68020/Unix Cross-Development Facility, Version 7 (#901116W1.11082)	R1000 Series 300 (under Rational Environment Version D_12_24_0)	HP 9000 Model 370MH (under HP-UX Version 7.0)
Rational M68020/Bare Cross-Development Facility, Version 7 (#901116W1.11083)	R1000 Series 300 (under Rational Environment Version D_12_24_0)	Motorola MVME135 (68020) (bare machine)
Rational Rational Environment, D_12_24_0 (#901116W1.11084)	R1000 Series 300 (under Rational Environment Version D_12_24_0)	Same as Host
*Validated by Registration Rockwell International Corporation DDC-Based Ada/CAPS Compiler, Version 6.1 (BASE #900306W1.11129)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 6000, VAX 8000 & VAX 9000 Series of computers (under VMS Versions 5.3-1 & 5.4)	CAPS/AAMP1 (bare machine)
*Validated by Registration Rockwell International Corporation DDC-Based Ada/CAPS Compiler, Version 6.1 (BASE #900306W1.11130)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 6000, VAX 8000 & VAX 9000 Series of computers (under VMS Versions 5.3-1 & 5.4)	CAPS/AAMP2 (bare machine)
Rockwell International Corporation DDC-Based Ada/CAPS Compiler, Version 6.0 (#910306W1.11129)	VAX 8650 (under VMS, Version 5.3-1)	CAPS/AAMP1 (bare machine)
Rockwell International Corporation DDC-Based Ada/CAPS Compiler, Version 6.0 (#910306W1.11130)	VAXstation 3100 Model 30 (under VMS 5.4)	CAPS/AAMP2 (bare machine)

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
SD-Scicon UK Ltd XD Ada MC68020, Version 1.2 (#901007N1.11042)	VAX Cluster (comprising VAXserver 3600, MicroVAX 2000 (2) & MicroVAX II machines) (under VMS Version 5.3)	Motorola MVME133XT board (MC68020) (bare machine)
*Validated by Registration SD-Scicon UK Ltd XD Ada MC68020 MVME135 & MVME147, Version 1.2A (BASE #901007N1.11042)	VAX Cluster (comprising VAXserver 3600, MicroVAX 2000 (2) & MicroVAX II machines) (under VMS 5.4)	Motorola MVME135-1 (MC68020) & MVME147S-1 (MC68030) boards (bare machines)
*Validated by Registration SD-Scicon UK Ltd XD Ada MC68020 Version 1.2 (BASE #901007N1.11042)	VAX Cluster (comprising VAXserver 3600, MicroVAX 2000 (2) & MicroVAX II machines) (under VMS 5.3)	Motorola MVME135-1 board (MC68020) and Motorola MVME147S-1 board (MC68030) (bare machines)
*Validated by Registration SD-Scicon UK Ltd XD Ada MC68020, Version 1.2A (BASE #901007N1.11042)	VAX Cluster (comprising VAXserver 3600, MicroVAX 2000 (2) & MicroVAX II machines) (under VMS 5.4)	Motorola MVME133XT board (MC68020) (bare machine)
*Validated by Registration SD-Scicon UK Ltd XD Ada MC68020/EFA, Version 1.2A (BASE #901007N1.11042)	VAX Cluster (comprising VAXserver 3600, MicroVAX 2000 (2) & MicroVAX II machines) (under VMS 5.4)	Motorola MVME135-1 board (MC68020) (bare machine)
SD-Scicon UK Ltd XD Ada MIL-STD-1750A, Version 1.2 (#901214N1.11080)	Local Area VAX Cluster (comprising VAXserver 3600, MicroVAX 2000 (2) & MicroVAX II machines) (under VMS 5.3)	Fairchild F9450 on a SBC-50 board (MIL-STD-1750A) (bare Machine)
SD-Scicon UK Ltd XD Ada MC68000, Version 1.2 (#910314N1.11134)	Local Area VAX Cluster (comprising VAXserver 3600, MicroVAX 2000 (2) & MicroVAX II machines) (under VMS 5.4)	Motorola MC68000 on an MVME117-3FP board (bare machine)
*Validated by Registration SD-Scicon UK Ltd XD Ada MC68000/EFA, Version 1.2 (BASE #910314N1.11134)	Local Area VAX Cluster (comprising VAXserver 3600, MicroVAX 2000 (2) & MicroVAX II machines) (under VMS 5.4)	Motorola MC68000 on an MVME117-3FP board (bare machine)
SD-Scicon UK Ltd XD Ada MC68020/ARTX, Version T1.2 (#910911N1.11199)	Local Area VAX Cluster (comprising VAXserver 3600, MicroVAX 2000 (2) & MicroVAX II machines) (under VMS 5.4)	Motorola MVME147S-1 (MC68030) (bare machine)
SD-Scicon UK Ltd XD Ada MC68040, Version 1.2 (#911128N1.11230)	Local Area VAX Cluster (comprising VAXserver 3600, MicroVAX 2000 (2) & MicroVAX II machines) (under VMS 5.4)	Motorola MVME165 (MC68040) (bare machine)
Siemens Nixdorf Informations-systeme AG SIEMENS NIXDORF BS2000 Ada Compiler V2.1 (#901119I1.11111)	SIEMENS NIXDORF 7.590G (under BS2000 V9.5)	Same as Host

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
*Validated by Registration Siemens Nixdorf Informations-systeme AG BS2000 Ada Compiler V2.1 (BASE #901119I1.11111)	SIEMENS NIXDORF 7.530, 7.536, 7.541, 7.550, 7.551, 7.560, 7.561, 7.570, 7.571, 7.580 & 7.590; 7.500-C30, -C40, -H60, -H90 & -H120 (under BS2000 V9.5 & V10.0)	Same as Host
Siemens Nixdorf Informations-systeme AG Ada (SINIX) V4.1 (#910711W1.11181)	Siemens Nixdorf WX200 (SINIX-ODT) (under SINIX-ODT V1.0)	Same as Host
*Validated by Registration Siemens Nixdorf Informations-systeme AG Ada (SINIX) V4.1 (BASE #910711W1.11181)	Siemens Nixdorf WX200 (SINIX-ODT) (under SINIX-ODT V1.5)	Same as Host
Silicon Graphics Computer Systems 4D ADA 3.0 (#900703W1.11014)	Iris-4D/380 (under IRIX Release 4D-3.3)	Same as Host
Silicon Graphics Computer Systems 4D ADA 3.0 (#900703W1.11015)	Iris-4D/220S (under IRIX Release 4D-3.3)	Same as Host
Silicon Graphics Computer Systems 4D ADA 3.0 (#900703W1.11016)	Iris-4D/25 (under IRIX Release 4D-3.3)	Same as Host
Silicon Graphics, Inc. VADS SGI-Irix, SC4-ADA-4.0, Version 6.1 (#910920W1.11203)	SGI Indigo (under Irix V4.0)	Same as Host
Silicon Graphics, Inc. VADS SGI-Irix, SC4-ADA-4.0, Version 6.1 (#910920W1.11204)	SGI 4D/440 (under Irix V3.3)	Same as Host
SKY Computers, Inc. Meridian Ada, Version 4.1 (#910711W1.11183)	SGI Personal Iris W-4D25 (under Irix System V 3.3)	SKYbolt 8116-V (under SKYbolt kernel version 2.33)
SKY Computers, Inc. Meridian Ada, Version 4.1 (#910711W1.11185)	SPARCstation 1 (under SunOS release 4.1)	SKYstation 8117-P (under SKYstation kernel version 2.33)
SKY Computers, Inc. Meridian Ada, Version 4.1 (#910711W1.11189)	SGI Personal Iris W-4D25 (under Irix System V 3.3)	Same as Host
*Validated by Registration Sun Microsystems Sun Microsystems Sun Ada, SunOS, ADE-1.0-4-4-21, Version 1.0 (BASE #900510W1.11006)	Sun Microsystems Sun-4, SPARCserver, & SPARCstation computer families; SPARCserver 600MP Series; & 4600MP-64 (under SunOS Version 4.2 releases 4.1 & 4.1.2, as supported)	Any Host

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
*Validated by Registration Sun Microsystems Sun Microsystems Sun Ada, SunOS, ADE-1.1-4-4-21, Version 1.1 (BASE #900510W1.11006)	Sun Microsystems Sun-4, SPARCserver, SPARCstation, & SPARCengine computer families; SPARCserver 600MP Series; & 4600MP-64 (under SunOS Version 4.2 release 4.1.2)	Any Host
Tartan, Inc. Tartan Ada VMS/C30, Version 4.0 (#901210I1.11121)	VAXstation 3100 (under VMS 5.2)	Texas Instruments TMS320C30 Application Board (bare machine)
*Validated by Registration Tartan, Inc. Tartan Ada VMS/C30, Version 4.1 (BASE #901210I1.11121)	VAXstation 3100 (under VMS 5.2)	Texas Instruments TMS320C30 Application Board (bare machine)
*Validated by Registration Tartan, Inc. Tartan Ada VMS/C30, Version 4.1.1 (BASE #901210I1.11121)	VAXstation 3100 (under VMS 5.2)	Texas Instruments TMS320C30 Application Board, NAVY SEM-D Key Code ADSP (bare machines)
Tartan, Inc. Tartan Ada Sun/960MC, Version 4.0 (#901210I1.11122)	Sun 3/60 (under SunOS Version 4.0.3)	Intel ICE960/25 on an Intel EXV80960MC board (bare machine)
Tartan, Inc. Tartan Ada Sun/Sun, Version 4.0 (#901211I1.11118)	Sun 3/60 (under SunOS Version 4.0.3)	Same as Host
*Validated by Registration Tartan, Inc. Tartan Ada Sun/Sun, Version 4.1 (BASE #901211I1.11118)	Sun 3/60 (under SunOS Version 4.0.3)	Same as Host
*Validated by Registration Tartan, Inc. Tartan Ada Sun/Sun, Version 4.2 (BASE #901211I1.11118)	Sun 3/60 (under SunOS Version 4.0.3)	Same as Host
Tartan, Inc. Tartan Ada VMS/960MC, Version 4.0 (#901212I1.11120)	VAXstation 3100 (under VMS 5.2)	Intel ICE960/25 on an Intel EXV80960MC board (bare machine)

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
*Validated by Registration Tartan, Inc. Tartan Ada VMS/960MC, Version 4.1 (BASE #901212I1.11120)	VAXstation 3100 (under VMS 5.2)	Intel EXV80960MC board, & Intel ICE960/25 on an Intel EXV80960MC board (bare machines)
Tartan, Inc. Tartan Ada Sun/C30 Version 4.0 (#901212I1.11123)	Sun 3/50 (under SunOS Version 4.0.3)	Texas Instruments TMS320C30 Application Board (bare machine)
*Validated by Registration Tartan, Inc. Tartan Ada Sun/C30, Version 4.1.1 (BASE #901212I1.11123)	Sun 3/50 (under SunOS Version 4.0.3)	Texas Instruments TMS320C30 Application Board (bare machine)
Tartan, Inc. Tartan Ada VMS/1750A, Version 4.0 (#901213I1.11119)	VAXstation 3200 (under VMS 5.2)	Texas Instruments STL VHSIC 1750A (bare machine)
*Validated by Registration Tartan, Inc. Tartan Ada VMS/1750A, Version 4.1 (BASE #901213I1.11119)	VAXstation 3200 (under VMS 5.2)	Texas Instruments STL VHSIC 1750A (bare machine)
Tartan, Inc. Tartan Ada VMS/680X0, Version 4.1 (#910613I1.11171)	VAXstation 3100 (under VMS 5.2)	Motorola MVME134 (MC68020) (bare machine)
*Validated by Registration Tartan, Inc. Tartan Ada VMS/680X0, Version 4.1.1 (BASE #910613I1.11171)	VAXstation 3100 (under VMS 5.2)	Motorola MVME134 (MC68020), MVME143 (MC68030), & MVME165 (MC68040) (bare machines)
TeleSoft TeleGen2 Sun-3 Ada Development System, Version 4.01 (#900525I1.11012)	Sun-3/280 (under Sun UNIX 4.2, Release 4.0.3)	Same as Host
TeleSoft TeleGen2 Ada Host Development System, Version 4.1, for SPARCSystems (#901128W1.11090)	Sun-4/280 (under Sun UNIX 4.2, Release 4.1)	Same as Host
*Validated by Registration TeleSoft TeleGen2 Ada Host Development System for SPARCSystems, Version 4.1 (BASE #901128W1.11090)	Sun Microsystems Sun-4, SPARCserver, SPARCstation, & SPARCengine computer families (under SunOS 4.2, release 4.1)	Any Host

Ada PROCESSORS *Continued*

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
*Validated by Registration TeleSoft TeleGen2 Ada Host Development System for SPARCSystems, Version 4.1 (BASE #901128W1.11090)	Solbourne Series 5 & 5E; and S4000 (under OS/MP 4.1)	Any Host
*Validated by Registration TeleSoft TeleGen2 Ada Host Development System for SPARCSystems, Version 4.1 (BASE #901128W1.11090)	Sun Microsystems Sun-4, SPARCserver, SPARCstation, & SPARCengine computer families (under SunOS 4.2, Release 4.1)	Any Host
*Validated by Registration TeleSoft TeleGen2 Ada Host Development System for SPARCSystems, Version 4.1 (BASE #901128W1.11090)	Solbourne Series 5 & 5E, and Solbourne S4000 (under OS/MP 4.1)	Any Host
TeleSoft TeleGen2 Ada Cross Development System, Version 4.1, for VAX/VMS to 68K (#910121I1.11124)	MicroVAX 3800 (under VAX/VMS Version 5.2)	Motorola MVME133A-20 (MC68020) (bare machine)
*Validated by Registration TeleSoft TeleGen2 Ada Cross Development System for VAX to 68K, Version 4.1 (BASE #910121I1.11124)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 6000, VAX 8000 & VAX 9000 Series of computers	Motorola board series MVME133*, MVME135*, MVME136* (MC68020); MVME141* & MVME147* (MC68030); and Force CPU-30, CPU-31, CPU-32 & CPU-37 (bare machines)
*Validated by Registration TeleSoft TeleGen2 Ada Cross Development System for VAX/VMS to 68K, Version 4.1 (BASE #910121I1.11124)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 6000, VAX 8000 & VAX 9000 Series of computers (as supported) (under VMS Versions 5.0, 5.1, 5.2, 5.3 & 5.4)	Motorola MVME165* & MVME167* (68040) board families (bare machines)
*Validated by Registration TeleSoft TeleSoft TRIAD System for VAX/VMS to 68K, Version 4.1 (BASE #910121I1.11124)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 6000, VAX 8000 & VAX 9000 Series of computers	Motorola board series MVME147* (MC68030) (bare machines, using TeleAda-Exec)
TeleSoft TeleGen2 Ada Cross Development System, Version 4.1, for VAX/VMS to MIPS (#910123I1.11125)	MicroVAX 3800 (under VAX/VMS Version 5.2)	Integrated Device Technology IDT7RS301 System (R3000/R3010) (bare machine)
TeleSoft TeleGen2 Ada Cross Development System, Version 4.1, for SUN-3 to 68K (#910125I1.11126)	Sun-3/480 (under Sun UNIX, Release 4.1)	Motorola MVME135-1 (MC68020) (bare machine)

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
TeleSoft TeleGen2 Ada Cross Development System, Version 3.1 for VAX/VMS to 386 (#910325I1.11139)	VAX 6210 (under VMS 5.3)	Intel iSBC 386-120 (80386/387) (bare machine, using TeleAda-EXEC 1.0)
*Validated by Registration TeleSoft TeleGen2 Ada Cross Development System, Version 3.1 (BASE #910325I1.11139)	VAX 4000-300 (under VMS 5.4-3)	Intel iSBC 486/133SE board (bare machine, using TeleAda-EXEC 1.0)
TeleSoft TeleGen2 Ada Cross Development System, Version 3.1 for SPARC to 68K (#910325I1.11140)	Sun-4/60 (under SunOS 4.1)	Motorola MVME147 (68030) (bare machine, using TeleAda-EXEC 1.0)
*Validated by Registration TeleSoft TeleGen2 Ada Cross Development System for SPARC to 68K, Version 4.1 (BASE #910325I1.11140)	Sun Microsystems Sun-4, SPARCserver & SPARCstation computer families (under SunOS 4.1)	Motorola MVME133*, MVME135*, MVME136* (68020); MVME141* & MVME147* (68030); and MVME165* & MVME167* (68040) board families (bare machines, optionally using TeleAda_Exec 2.0)
TeleSoft TeleGen2 Ada Host Development System, Version 4.1, for MacII Systems (#910721I1.11194)	Apple Macintosh IIfx (under A/UX 2.0)	Same as Host
*Validated by Registration TeleSoft TeleGen2 Ada Host Development System for MacII Systems, Version 4.1 (BASE #910721I1.11194)	Apple Macintosh II family, & SE/30 (under A/UX Release 2.0)	Any Host
TeleSoft TeleGen2 Ada Development System for VAX to 1750A, Version 3.25 (#911028I1.11229)	MicroVAX 3800 (under VMS Version 5.4)	MIL-STD-1750A ECSPO ITS RAID Simulator, Version 6.0 (bare machine simulation, executing on the Host)
TeleSoft TeleGen2 Ada Development System for VAX to 1750A, Version 3.25 (#911028I1.11229)	MicroVAX 3800 (under VMS Version 5.4)	MIL-STD-1750A ECSPO ITS RAID Simulator, Version 6.0 (bare machine simulation, executing on the Host)
TeleSoft TeleGen2 Ada Compilation System for VAX to 80960, Version 4.1 (#911213I1.11235)	MicroVAX 3800 (under VMS Version 5.4)	Intel EXV 960 MC-MIL (i960 XA) (bare machine, using Hughes O.S. Ada RTS interface)
Texas Instruments MIPS-Ada, Version 3.0 (#901030W1.11052)	MIPS M/2000 (under RISC/os 4.02)	TI DP32 R3000 Processor (bare machine, using TI DP32 RTE Version 1.0)

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
Texas Instruments TI Ada, Version 1.0 (#910403W1.11135)	MicroVAX 3400 (under VMS 5.3-1)	TI DP32 R3000 Processor (bare machine, using TI Executive and Runtime Services (EARS) Version 1.0)
U.S. Air Force AFCAS 1750A Ada Compiler, Version 1.0 (#910425W1.11142)	VAXstation 3100 (under VMS Version 5.3)	Air Force RAID MIL-STD-1750A simulator (bare machine simulation, executing on the Host)
U.S. Air Force AFCAS 1750A/XMEM Ada Compiler, Version 1.0 (#910425W1.11143)	VAXstation 3100 (under VMS Version 5.3)	Air Force RAID MIL-STD-1750A simulator (bare machine simulation, executing on the Host)
U.S. NAVY AdaVAX, Version 5.0 (/OPTIMIZE) (#910517S1.11162)	VAX 8600 (under VMS Version 5.3)	Same as Host
U.S. NAVY AdaVAX, Version 5.0 (/NO_OPTIMIZE) (#910517S1.11163)	VAX 8600 (under VMS Version 5.3)	Same as Host
U.S. NAVY AdaVAX, Version 5.0 (/OPTIMIZE) (#910517S1.11164)	VAX-11/785 (under VMS Version 5.3)	Same as Host
U.S. NAVY AdaVAX, Version 5.0 (/NO_OPTIMIZE) (#910517S1.11165)	VAX-11/785 (under VMS Version 5.3)	Same as Host
U.S. NAVY Ada/L, Version 4.0 (/OPTIMIZE) (#910626S1.11172)	VAX 8550 (under VMS Version 5.3)	AN/UYK-43 (single cpu) (bare machine)
U.S. NAVY Ada/L, Version 4.0 (/OPTIMIZE) (#910626S1.11173)	VAX 8550 (under VMS Version 5.3)	AN/UYK-43 (EMR) (bare machine)
U.S. NAVY Ada/M, Version 4.0 (/OPTIMIZE) (#910626S1.11174)	VAX 8550 (under VMS Version 5.3)	AN/UYK-44 (EMR) (bare machine)
U.S. NAVY Ada/M, Version 4.0 (/OPTIMIZE) (#910626S1.11175)	VAX 8550 (under VMS Version 5.3)	AN/AYK-14 (bare machine)
U.S. NAVY Ada/L, Version 4.0 (/OPTIMIZE) (#910626S1.11176)	VAX-11/785 (under VMS Version 5.3)	AN/UYK-43 (single cpu) (bare machine)
U.S. NAVY Ada/L, Version 4.0 (/OPTIMIZE) (#910626S1.11177)	VAX-11/785 (under VMS Version 5.3)	AN/UYK-43 (EMR) (bare machine)

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
U.S. NAVY Ada/M, Version 4.0 (/OPTIMIZE) (#910626S1.11178)	VAX-11/785 (under VMS Version 5.3)	AN/UYK-44 (EMR) (bare machine)
U.S. NAVY Ada/M, Version 4.0 (/OPTIMIZE) (#910626S1.11179)	VAX-11/785 (under VMS Version 5.3)	AN/AYK-14 (bare machine)
UNISYS Corporation UCS Ada, Version 1R1 (#910510S1.11161)	UNISYS 2200/600 (under OS1100, Version 43R2)	Same as Host
*Validated by Registration UNISYS Corporation UCS Ada, Version 1R1 (BASE #910510S1.11161)	UNISYS 1100/90, 2200/100, /200, /400, /600, & /900 (under OS 1100, Versions 43R2 & 43R3, as supported)	Any Host
Verdix Corporation VAda-110-6161, Version 6.0.2 (#900228W1.11001)	DECstation 3100 (under ULTRIX 3.1)	Same as Host
*Validated by Registration Verdix Corporation VAda-110-6161, Version 6.0.2 (BASE #900228W1.11001)	DECstation 2100, 5000; DECsystem 5400, 5810, 5820, 5830, 5840 (under ULTRIX 3.1)	Any Host
*Validated by Registration Verdix Corporation VADS DEC-RISC, Ultrix 4.0, VAda-110-6161, Version 6.0 (BASE #900228W1.11001)	DECstation 2100, 3100, 5000 & 5200; and DECsystem 3100, 5000, 5100, 5200, 5400, 5500, 5810, 5820, 5830 & 5840 (under ULTRIX 4.0)	Any Host
*Validated by Registration Verdix Corporation VADS DEC-RISC, Ultrix 4.1, VAda-110-6161, Version 6.0 (BASE #900228W1.11001)	DECstation 2100, 3100, 5000 & 5200; and DECsystem 3100, 5000, 5100, 5200, 5400, 5500, 5810, 5820, 5830 & 5840 (under ULTRIX 4.1)	Any Host
*Validated by Registration Verdix Corporation VADS DEC-RISC, Ultrix 4.2, VAda-110-6161, Version 6.0 (BASE #900228W1.11001)	DECstation 2100, 3100, 5000 & 5200; DECsystem 3100, 5000, 5100, 5200, 5400, 5500, 5810, 5820, 5830 & 5840 (under Ultrix 4.2)	Any Host
Verdix Corporation VAda-110-0202, Version 6.0 (#900228W1.11002)	VAXsystem 3100 (under ULTRIX 3.1)	Same as Host

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
*Validated by Registration Verdix Corporation VAda-110-0202, Version 6.0 (BASE #900228W1.11002)	DEC VAX-11, MicroVAX, VAXserver, VAXstation, VAX 6000, VAX 8000 & VAX 9000 series (under ULTRIX 4.0)	Any Host
*Validated by Registration Verdix Corporation VAda-110-0202, Version 6.0 (BASE #900228W1.11002)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 6000, VAX 8000 & VAX 9000 Series of computers (under ULTRIX 4.2)	Any Host
Verdix Corporation VADS Sun3 SunOS, VAda-110-1313, Version 6.0 (#900510W1.11003)	Sun 3/280 (under SunOS 4.0)	Same as Host
*Validated by Registration Verdix Corporation VADS Sun-3 Sun OS, VAda-110-1313, Version 6.0 (BASE #900510W1.11003)	Sun-3/50, /60, /80, /150, /160, /260, /280, /470 & /480 (under SunOS 4.0 & 4.1)	Any Host machine (under same OS version)
Verdix Corporation VADS IBM PS/2 AIX => Intel 80386, VAda-110-35315, Version 6.0 (#900510W1.11004)	IBM PS/2 Model 80 (under AIX 1.1)	Intel iSBC 386/12 (bare machine)
Verdix Corporation VADS IBM PS/2 AIX => 68K, VAda-110-35125, Version 6.0 (#900510W1.11005)	IBM PS/2 Model 80 (under AIX 1.1)	Motorola MVME133A-20 (MC68020) (bare machine)
Verdix Corporation VADS Sun-4 SunOS, VAda-110-4040, Version 6.0 (#900510W1.11006)	Sun 4/280 (under SunOS 4.0)	Same as Host
*Validated by Registration Verdix Corporation Sun Microsystems Sun Ada, SunOS, ADE-1.0-4-4-21, Version 1.0 (BASE #900510W1.11006)	Sun-4/20, /65, /110, /150, /260 & /280; SPARCserver 330, 370, 390, 470 & 490; SPARCstation SLC, 1, 1+, 2, 330 & 370; and SPARCengine 1 VME, IPC (under SunOS 4.1)	Any Host
*Validated by Registration Verdix Corporation VAda-110-4040, Version 6.0 (BASE #900510W1.11006)	Sun-4/20, /65, /110, /150 & /260; SPARCserver 310, 330, 370, 390, 470 & 490; SPARCstation SLC, 1, 1+, 2, 310, 330 & 370; and SPARCengine 1 VME (under SunOS 4.1)	Any Host
*Validated by Registration Verdix Corporation VAda-110-4040, Version 6.0 (BASE #900510W1.11006)	Sun-4/20, /65, /110, /150 & /260; SPARCserver 310, 330, 370, 390, 470 & 490; SPARCstation SLC, 1, 1+, 2, 310, 330 & 370; and SPARCengine 1 VME (under SunOS 4.1)	Any Host

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
Verdix Corporation VADS Sun3 SunOS => 68K, VAda-110-13125, Version 6.0 (#900510W1.11007)	Sun 3/280 (under SunOS 4.0)	Motorola MVME147 (MC68030) (bare machine)
*Validated by Registration Verdix Corporation VADS Sun3 SunOS => 68K, VAda-110-13125, Version 6.0 (BASE #900510W1.11007)	Sun-3/50, /60, /80, /150, /160, /260, /280, /470 & /480 (under SunOS 4.0 & 4.1)	Cyclone CVME 44, CVME 46 & CVME 48; Force CPU 21, CPU 29, CPU 30, CPU 31, CPU 32, CPU 37 & Golden Triangle Firepower; Heurikon HK68/V30 Series, V2E Series & V2F Series; Integrated Solutions VME68K20, VME68K30, VME68225 & Liberator SBC; Matrix MS-CPU220 & MS-CPU320; Mizar MZ7120, MZ7122, MZ7124, MZ7130, MZ7170, MZ8120 & MZ8130; Sun Microsystems 3E Board Set; Motorola MVME147 Series & MVME141 (MC68030), MVME133 Series, MVME134, MVME135 & MVME136 (MC68020), MVME-110, MVME-165 & MVME-167; Tadpole TP32V & TP33M (bare machines)
Validated by Registration Verdix Corporation VADS Sun3 SunOS => 68K, VAda-110-13125, Version 6.0 (BASE #900510W1.11007)	Sun-3/50, /60, /80, /150, /160, /260, /280, /470 & /480 (under SunOS 4.0 & 4.1)	Cyclone CVME 44, CVME 46 & CVME 48; Force CPU 21, CPU 29, CPU 30, CPU 31, CPU 32, CPU 37 & Golden Triangle Firepower; Heurikon HK68/V30 Series, V2E Series & V2F Series; Integrated Solutions VME68K20, VME68K30, VME68225 & Liberator SBC; Matrix MS-CPU220 & MS-CPU320; Mizar MZ7120, MZ7122, MZ7124, MZ7130, MZ8120 & MZ8130; Sun Microsystems 3E Board Set; Motorola MVME147 Series & MVME141 (MC68030), MVME133 Series, MVME134, MVME135 & MVME136 (MC68020), MVME-110, MVME-165 & MVME-167; Tadpole TP32V & TP33M (bare machines)
Verdix Corporation VADS IBM RISC System/6000, AIX 3.1, VAda-110-7171, Version 6.0 (#900726W1.11017)	IBM RISC System/6000 Model 530 (under AIX 3.1)	Same as Host
*Validated by Registration Verdix Corporation VADS IBM RISC System/6000, AIX 3.1, VAda-110-7171, Version 6.0 (BASE #900726W1.11017)	IBM RISC System/6000 Models 320, 520, 540, 730 & 930 (under AIX 3.1)	Any Host
Verdix Corporation VADS HP 9000/300, HP-UX 7.0, VAda-110-1515, Version 6.0 (#900726W1.11018)	HP 9000/350 (under HP-UX 7.0)	Same as Host
*Validated by Registration Verdix Corporation VADS HP 9000/300, HP-UX 7.0, VAda-110-1515, Version 6.0 (BASE #900726W1.11018)	HP 9000 Series 300 Models 310, 320, 330, 340, 350, 360 & 370 (under HP-UX 7.0)	Any Host

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
Verdix Corporation VADS Prime EXL/320, UNIX System V/386 3.2, VAda-110-3232, Version 6.0 (#900726W1.11019)	Prime EXL/320 (under UNIX System V/386 3.2)	Same as Host
Verdix Corporation VADS VAX/VMS 5.2, VAda-110-0303, Version 6.0 (#900726W1.11020)	MicroVAX 3100 (under VAX/VMS V5.2)	Same as Host
*Validated by Registration Verdix Corporation VADS VAX/VMS 5.3, VAda-110-0303, Version 6.0 (BASE #900726W1.11020)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 6000, VAX 8000 & VAX 9000 Series of computers (under VMS 5.3)	Any Host
Verdix Corporation VADS VAX/VMS = > 68k, VMS 5.2, VAda-110-03125, Version 6.0 (#900726W1.11021)	MicroVAX 3100 (under VAX/VMS V5.2)	Motorola MVME147 (MC68030) (bare machine)
*Validated by Registration Verdix Corporation VADS VAX/VMS = > 68K, VMS 5.2, VAda-110-03125, Version 6.0 (BASE #900726W1.11021)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 6000, VAX 8000 & VAX 9000 Series of computers (under VMS 5.2)	Cyclone CVME 44, CVME 46, CVME 48; Force CPU 21, CPU 29, CPU 30, CPU 31, CPU 32, CPU 37 & Golden Triangle Firepower; Heurikon HK68/V30 Series, V2E Series & V2F Series; Integrated Solutions VME68K20, VME68K30, VME68225 & Liberator SBC; Matrix MS-CPU220 & MS-CPU320; Mizar MZ7120, MZ7122, MZ7124, MZ7130, MZ7170, MZ8120 & MZ8130; Sun Microsystems 3E Board Set; Motorola MVME147 Series & MVME141 (MC68030), MVME133 Series, MVME134, MVME135 & MVME136 (MC68020), MVME-165 & MVME167; Tadpole TP32V & TP33M (bare machines)
*Validated by Registration Verdix Corporation VADS VAX/VMS = > 68K, VMS 5.2, VAda-110-03125, Version 6.0 (BASE #900726W1.11021)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 6000, VAX 8000 & VAX 9000 Series of computers (under VMS 5.2)	Cyclone CVME 44, CVME 46 & CVME 48; Force CPU 21, CPU 29, CPU 30, CPU 31, CPU 32, CPU 37 & Golden Triangle Firepower; Heurikon HK68/V30 Series, V2E Series & V2F Series; Integrated Solutions VME68K20, VME68K30, VME68225 & Liberator SBC; Matrix MS-CPU220 & MS-CPU320; Mizar MZ7120, MZ7122, MZ7124, MZ7130, MZ8120 & MZ8130; Sun Microsystems 3E Board Set; Motorola MVME147 Series & MVME141 (MC68030), MVME133 Series, MVME134, MVME135 & MVME136 (MC68020), MVME-165 & MVME167; Tadpole TP32V & TP33M (bare machines)
Verdix Corporation VADS VAX/VMS = > Intel 386, VMS 5.2, VAda-110-03315, Version 6.0 (#900726W1.11022)	MicroVAX 3100 (under VAX/VMS V5.2)	Intel iSBC 386/32 (bare machine)
*Validated by Registration Verdix Corporation VADS VAX/VMS = > Intel 386, VMS 5.3, VAda-110-03315, Version 6.0 (BASE #900726W1.11022)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 6000, VAX 8000 & VAX 9000 Series of computers (under VMS 5.3)	Intel iSBC 386/32 (bare machine)

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
Verdix Corporation VADS VAX/Ultrix = >68k, Ultrix 3.1, VAda-110-02125, Version 6.0 (#900726W1.11023)	MicroVAX 3100 (under Ultrix 3.1)	Tektronix MV System, MV 68020 Support System, using TekDB Version 5.0.2 emulation software (bare Machine simulation)
*Validated by Registration Verdix Corporation VADS VAX/ULTRIX = > 68K, ULTRIX 3.1, VAda-110-02125, Version 6.0 (BASE #900726W1.11023)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 6000, VAX 8000 & VAX 9000 Series of computers (under Ultrix 3.1)	Cyclone CVME 44, CVME 46 & CVME 48; Force CPU 21, CPU 29, CPU 30, CPU 31, CPU 32, CPU 37 & Golden Triangle Firepower; Heurikon HK68/V30 Series, V2E Series & V2F Series; Integrated Solutions VME68K20, VME68K30, VME68225 & Liberator SBC; Matrix MS-CPU220 & MS-CPU320; Mizar MZ7120, MZ7122, MZ7124, MZ7130, MZ8120 & MZ8130; Sun Microsystems 3E Board Set; Motorola MVME147 Series & MVME141 (MC68030), MVME133 Series, MVME134 & MVME135 (MC68020); Tadpole TP32V & TP33M (bare machines); Tektronix MV System, MV 68020 Support System using TekDB Version 5.0.2 emulation software (bare machine simulation)
Verdix Corporation VADS DEC-RISK = >68k, Ultrix 3.1, VAda-110-61125, Version 6.0 (#900726W1.11024)	DECstation 3100 (under Ultrix 3.1)	Motorola MVME147 (MC68030) (bare machine)
*Validated by Registration Verdix Corporation VADS DEC-RISC = > 68K, Ultrix 4.0, VAda-110-61125, Version 6.0 (BASE #900726W1.11024)	DECstation 2100, 3100, 5000 & 5200; and DECsystem 3100, 5000, 5100, 5200, 5400, 5500, 5810, 5820, 5830 & 5840 (under ULTRIX 4.0)	Cyclone CVME 44, CVME 46 & CVME 48; Force CPU 21, CPU 29, CPU 30, CPU 31, CPU 32, CPU 37 & Golden Triangle Firepower; Heurikon HK68/V30 Series, V2E Series & V2F Series; Integrated Solutions VME68K20, VME68K30, VME68225 & Liberator SBC; Matrix MS-CPU220 & MS-CPU320; Mizar MZ7120, MZ7122, MZ7124, MZ7130, MZ8120 & MZ8130; Sun Microsystems 3E Board Set; Motorola MVME147 Series (MC68030), MVME133 Series, MVME134 & MVME135 (MC68020); Tadpole TP32V & TP33M (bare machines)
Verdix Corporation VADS IBM RISC System/6000 = >68k, AIX 3.1, VAda-110-71125, Version 6.0 (#900726W1.11025)	IBM RISC System/6000 Model 530 (under AIX 3.1)	Motorola MVME147 (MC68030) (bare machine)
*Validated by Registration Verdix Corporation VADS IBM RISC System/6000 = >68K, AIX 3.1, VAda-110-71125, Version 6.0 (BASE #900726W1.11025)	IBM RISC System/6000 Models 320, 520, 540, 730 & 930 (under AIX 3.1)	Cyclone CVME 44, CVME 46 & CVME48; Force CPU 21, CPU 29, CPU 30, CPU 31, CPU 32, CPU 37 & Golden Triangle Firepower; Heurikon HK68/V30 Series, V2E Series & V2F Series; Integrated Solutions VME68K20, VME68K30, VME68225 & Liberator SBC; Matrix MS-CPU220 & MS-CPU320; Mizar MZ7120, MZ7122, MZ7124, MZ7130, MZ8120 & MZ8130; Sun Microsystems 3E Board Set; Motorola MVME133 Series, MVME134, MVME135 & MVME147 Series; and Tadpole TP32V & TP33M (bare machines)

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
Verdix Corporation VADS IBM RISC System/6000= >386, AIX 3.1, VAda-110-71315, Version 6.0 (#900726W1.11026)	IBM RISC System/6000 Model 530 (under AIX 3.1)	Intel ISBC 386/116 (bare machine)
*Validated by Registration Verdix Corporation VADS IBM RISC System/6000= >386, AIX 3.1, VAda-110-71315, Version 6.0 (BASE #900726W1.11026)	IBM RISC System/6000 Models 320, 520, 540, 730 & 930 (under AIX 3.1)	Intel iSBC 386/116 (bare machine)
Verdix Corporation VADS VAX/VMS 5.2 = > Intel 80386/WEITEK 3167, VAda-110-03315, Version 6.0 (#901129W1.11094)	MicroVAX 3100 (under VMS Version 5.2)	Intel iSBC 386/116 uisng a WEITEK 3167 fpu (bare machine)
*Validated by Registration Verdix Corporation VADS VAX/VMS 5.3 = > Intel 80386/WEITEK 3167, VAda-110-03315, Version 6.0 (BASE #901129W1.11094)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 6000, VAX 8000 & VAX 9000 Series of computers (under VMS 5.3)	Intel iSBC 386/116 using a WEITEK 3167 fpu (bare machine)
Verdix Corporation VADS UNIX System V/386, Rel. 4, VAda-110-3232, Version 6.0 (#901129W1.11095)	Intel 302 System (under UNIX System V/386, Release 4)	Same as Host
Verdix Corporation VADS Sequent Balance DYNIX V3.0, VAda-110-2323, Version 6.0 (#901129W1.11096)	Sequent Balance 8000 (under DYNIX Version 3.0)	Same as Host
Verdix Corporation VADS Sun4 = > 68K, Sun OS 4.0, VAda-110-40125, Version 6.0 (#901129W1.11097)	Sun-4/260 (under SunOS 4.0)	Motorola MVME147 (68030) (bare machine)
*Validated by Registration Verdix Corporation VADS Sun4 = > 68K, Sun OS 4.0, VAda-110-40125, Version 6.0 (BASE #901129W1.11097)	Sun-4/20, /65, /110 & /150; SPARCserver 330, 370, 390, 470 & 490; SPARCstation SLC, 1, 1+, 2, 330 & 370; and SPARCengine 1 VME (under SunOS 4.1)	Cyclone CVME 44, CVME 46 & CVME 48; Force CPU 21, CPU 29, CPU 30, CPU 31, CPU 32, CPU 37 & Golden Triangle Firepower; Heurikon HK68/V30 Series, V2E Series & V2F Series; Integrated Solutions VME68K20, VME68K30, VME68225 & Liberator SBC; Matrix MS-CPU220 & MS-CPU320; Mizar MZ7120, MZ7122, MZ7124, MZ7130, MZ8120 & MZ8130; Sun Microsystems 3E Board Set; Motorola MVME110 (MC68000), MVME133 Series, MVME134, MVME135 & MVME136 (MC68020), MVME147 Series & MVME141 (MC68030), MVME-165 & MVME-167 (MC68040); Tadpole TP32V & TP33M (bare machines)
Verdix Corporation VADS Sun-4 = > Sun-3, Sun OS 4.0, VAda-110-4013, Version 6.0 (#901129W1.11098)	Sun-4/260 (under SunOS 4.0)	Sun-3/260 (under SunOS 4.0)

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
*Validated by Registration Verdix Corporation VADS Sun-4 = > Sun-3, Sun OS 4.0, VAda-110-4013, Version 6.0 (BASE #901129W1.11098)	Sun-4/20, /65, /110, /150, /260 & /280; SPARCserver 330, 370, 390, 470 & 490; SPARCstation SLC, 1, 1+, 2, 330 & 370; and SPARCengine 1 VME (under SunOS 4.1)	Sun-3/50, /60, /80, /150, /160, /260, /280, /470 & /480 (under SunOS 4.1)
Verdix Corporation VADS AT&T 3B2/600G UNIX System V, Release 3.2.2, VAda-110-5151, Version 6.0 (#901129W1.11099)	AT&T 3B2/600G (under UNIX System V, Release 3.2.2)	Same as Host
Verdix Corporation VADS HP-9000/300 = > 68K, HP-UX 7.0 VAda-110-15125, Version 6.0 (#901129W1.11100)	HP 9000 Model 350 (under HP-UX 7.0)	Motorola MVME133A (68020) (bare machine)
*Validated by Registration Verdix Corporation VADS HP-9000/300 = > 68K, HP-UX 7.0, VAda-110-15125, Version 6.0 (BASE #901129W1.11100)	HP 9000 Series 300 Models 310, 320, 330, 340, 350, 360 & 370 (under HP-UX 7.0)	Cyclone CVME 44, CVME 46 & CVME 48; Force CPU 21, CPU 29, CPU 30, CPU 31, CPU 32, CPU 37 & Golden Triangle Firepower; Heurikon HK68/V30 Series, V2E Series & V2F Series; Integrated Solutions VME68K20, VME68K30, VME68225 & Liberator SBC; Matrix MS-CPU220 & MS-CPU320; Mizar MZ7120, MZ7122, MZ7124, MZ7130, MZ8120 & MZ8130; Sun Microsystems 3E Board Set; Motorola MVME147 Series (MC68030), MVME133 Series, MVME134 & MVME135 (MC68020); Tadpole TP32V & TP33M (bare machines)
Verdix Corporation VADS BCS/88K, AViion DGUX 4.3, VAda-110-8080, Version 6.1 (#901129W1.11101)	Data General AViiON Model 5120 (under DG/UX 4.3)	Same as Host
*Validated by Registration Verdix Corporation VADS BCS/88K AViion DGUX 5.4, VAda-110-8080, Version 6.1 (BASE #901129W1.11101)	Data General AViiON Models 4000, 4000GHI, 4020, 4100, 4120, 5010, 5200, 5220, 5240, 5300, 5310, 5400, 5402, 5410, 5412, 6200 & 6220 (under DG/UX 5.4)	Any Host
*Validated by Registration Verdix Corporation VADS BCS/88K, VAda-110-8080, Version 6.1 (BASE #901129W1.11101)	MODCOMP Real Star Family (under REAL/IX C.0.2)	Any Host
*Validated by Registration Verdix Corporation VADS BCS/88K, AViion DGUX 4.3, VAda-110-8080, Version 6.1 (BASE #901129W1.11101)	DG AViiON Models 4000, 4000GHI, 4020, 4100, 4120, 5010, 5200, 5220, 5240, 5300, 5310, 5400, 5402, 5410, 5412, 6200 & 6220 (under DG/UX 4.3)	Any Host
Verdix Corporation VADS Sun4 = > SPARC, Sun OS 4.1, VAda-110-40440, Version 6.0 (#901129W1.11102)	Sun-4/490 (under SunOS 4.1)	SPARCengine 1E (bare machine)

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
*Validated by Registration Verdix Corporation VADS Sun4 = > SPARC, Sun OS 4.1, VAda-110-40440, Version 6.0 (BASE #901129W1.11102)	Sun-4/20, /65, /110, /150 & /260; SPARCserver 330, 370, 390, 470 & 490; and SPARCstation SLC, 1, 1+, 2, 330 & 370 (under SunOS 4.1)	SPARCengine 1E (bare machine)
Verdix Corporation VADS Sun-3 SunOS = > 68k, VAda-110-13140, Version 6.0 (#910517W1.11149)	Sun 3/260 (under SunOS Release 4.0)	Motorola MVME165 (68040) (bare machine)
*Validated by Registration Verdix Corporation VADS Sun-3 SunOS = > 68k, VAda-110-13140, Version 6.0 (BASE #910517W1.11149)	Sun Microsystems Sun-3 computer family (under SunOS 4.1)	Motorola MVME 165 (MC68040) (bare machine)
Verdix Corporation VADS DEC-RISC = > MIPS R3000, VAda-110-61620, Version 6.1 (#910517W1.11150)	DECstation 5000-200 (under ULTRIX V4.0)	Lockheed Sanders STAR MVP (R3000) (bare machine)
*Validated by Registration Verdix Corporation VADS DEC-RISC = > MIPS R3000, VAda-110-61620, Version 6.1 (BASE #910517W1.11150)	DEC DECstation & DECsystem computer families (under ULTRIX 4.0)	Lockheed Sanders STAR MVP (R3000) (bare machine)
Verdix Corporation VADS VMS = > MIPS R3000, VAda-110-03620, Version 6.1 (#910517W1.11151)	MicroVAX 3600 (under VMS V5.2)	Integrated Device Technology IDT7RS302 (bare machine)
*Validated by Registration Verdix Corporation VADS VMS = > MIPS R3000, VAda-110-03620, Version 6.1 (BASE #910517W1.11151)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 6000, VAX 8000 & VAX 9000 Series of computers (under VMS 5.3)	Integrated Device Technology IDT7RS302 (bare machine)
Verdix Corporation VADS Sun-4 SunOS = > 68k, VAda-110-40140, Version 6.0 (#910517W1.11152)	Sun 4/280 (under SunOS Release 4.0)	Motorola MVME165 (68040) (bare machine)
*Validated by Registration Verdix Corporation VADS Sun4 SunOS = > 68k, VAda-110-40140, Version 6.0 (BASE #910517W1.11152)	Sun Microsystems Sun-4, SPARCserver & SPARCstation computer families (under SunOS 4.1)	Motorola MVME165 (68040) (bare machine)
Verdix Corporation VADS DEC-RISC = > 88k, VAda-110-61680, Version 6.1 (#910517W1.11153)	DECstation 2100 (under ULTRIX V4.0)	Motorola MVME181 (bare machine)

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
*Validated by Registration Verdix Corporation VADS DEC-RISC = > 88k, VAda-110-61680, Version 6.1 (BASE #910517W1.11153)	DEC DECstation & DECsystem computer families (under ULTRIX 4.0)	Motorola MVME181 (88000) (bare machine)
Verdix Corporation VADSworks Sun4 = > 68k, VAda-115-40800, Version 2.0 (#910517W1.11154)	Sun 4/20 (under SunOS 4.1.1)	Motorola MVME147SA (bare Machine, using vxWorks 5.0)
*Validated by Registration Verdix Corporation VADSworks Sun4 = > 68k, VAda-115-40800, Version 2.0 (BASE #910517W1.11154)	Sun Microsystems Sun-4, SPARCserver & SPARCstation computer families (under SunOS 4.1)	Force CPU 21, CPU 29, CPU 30, CPU 31, CPU 32, CPU 33, CPU 37, & Golden Triangle Firepower; General Micro Systems GMSV17 & GMSV37; Heurikon HK68/V20, /V2E, /V2F, /V2FA, /V30, /V30XE, /V3E, & /V3F; Ironics IV-3201a, 3204a, 3220, & 3230; Matrix MS-CPU320; Mizar MZ7122 & MZ7124; Motorola MVME133 Series, MVME135, MVME135A, MVME141, MVME143, & MVME147; Radstone PME 68-25 & 68-31; SBE VLAN-e & VPU30; Sun Microsystems 3E; and Tadpole Technology TP32V-4MB (bare machines, using vxWorks 5.0)
Verdix Corporation VADS UNIX System V/486, SCO UNIX 3.2, VAda-110-3232, Version 6.0 (#910517W1.11155)	Zenith Z-486/25E (under SCO UNIX i386 release 3.2)	Same as Host
*Validated by Registration Verdix Corporation VADS UNIX System V/486, SCO UNIX 3.2, VAda-110-3232, Version 6.0 (BASE #910517W1.11155)	Zenith Z-486/33E (under SCO UNIX i386 release 3.2)	Same as Host
Verdix Corporation VADS Sun-4 SunOS = > AMD 29K, 6.0 VAda-110-40525, Version 6.0 (#910517W1.11156)	Sun 4/280 (under SunOS 4.0.3)	Ironics IV9001 board (AMD 29000) (bare machine)
*Validated by Registration Verdix Corporation VADS Sun4 SunOS = > AMD 29K, VAda-110-40525, Version 6.0 (BASE #910517W1.11156)	Sun Microsystems Sun-4, SPARCserver & SPARCstation computer families (under SunOS 4.1)	Ironics IV9001 board (AMD 29000) (bare machine)
Verdix Corporation VADS UNIX System V/486, SCO UNIX 3.2, VAda-110-3232, Version 6.1 (#910517W1.11157)	Intel 402 (under SCO UNIX 3.2v2.e)	Same as Host
Verdix Corporation VADS MIPS, VAda-110-6262, Version 6.1 (#910920W1.11200)	MIPS RC3230 (under RISC/os 4.52)	Same as Host

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
Verdix Corporation VADS VAX/VMS = > 68040, VAda-110-03140, Version 6.0 (#910920W1.11201)	MicroVAX 3100 (under VMS 5.3)	Motorola MVME165 (68040) (bare machine)
*Validated by Registration Verdix Corporation VADS VAX/VMS = > 68040, VAda-110-03140, Version 6.0 (BASE #910920W1.11201)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 6000, VAX 8000, & VAX 9000 Series of computers (under VMS 5.3)	Motorola MVME165 (68040) (bare machine)
Verdix Corporation VADS IBM RS/6000 = > MIPS R3000, VAda-110-71620, Version 6.1 (#910920W1.11202)	IBM RISC System/6000 Model 530 (under AIX 3.1)	IDT 7RS302 (R3000) (bare machine)
*Validated by Registration Verdix Corporation VADS IBM RS/6000 AIX 3.1, VAda-110-71620, Version 6.1 (BASE #910920W1.11202)	IBM RISC System/6000 Models 320, 520, 540, 730, & 930 (under AIX 3.1)	IDT 7RS302 (R3000) (bare machine)
Verdix Corporation VADS Sun-4 = > MIPS R3000, VAda-110-40620, Version 6.1 (#910920W1.11205)	SPARCserver 490 (under SunOS Release 4.1)	LSI LR33000 Pocket Rocket Evaluation board (R3000) (bare machine)
*Validated by Registration Verdix Corporation VADS Sun-4 = > MIPS R3000, VAda-110-40620, Version 6.1 (BASE #910920W1.11205)	Sun Microsystems Sun-4, SPARCserver, & SPARCstation computer families (under SunOS 4.1)	LSI LR33000 Pocket Rocket Evaluation board (R3000) (bare machine)
Verdix Corporation VADS Sun-4 SunOS = > MC68000/10, VAda-110-40128, Version 6.0 (#910920W1.11206)	Sun-4/280 (under SunOS Release 4.0.3)	Motorola MVME101 (68000) with MVME222-1 memory board (bare machine)
*Validated by Registration Verdix Corporation VADS Sun4 = > MC68000/10, VAda-110-40128, Version 6.0 (BASE #910920W1.11206)	Sun Microsystems Sun-4, SPARCserver, & SPARCstation computer families (under SunOS 4.1)	Motorola MVME101 (68000) with MVME222-1 memory board (bare machine)
Verdix Corporation VADS Sun-4 SunOS = > CPU32, VAda-110-40150, Version 6.0 (#910920W1.11207)	Sun-4/280 (under SunOS Release 4.0.3)	Motorola CPU32 - M68332EVS Evaluation System (68332) (bare machine)
*Validated by Registration Verdix Corporation VADS Sun-4 SunOS = > CPU32, VAda-110-40150, Version 6.0 (BASE #910920W1.11207)	Sun Microsystems Sun-4, SPARCserver, & SPARCstation computer families (under SunOS 4.1)	Motorola CPU32 - M68332EVS Evaluation System (68332) (bare machine)

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
Verdix Corporation VADS IBM PS/2, AIX 1.1, VAda-110-3535, Version 6.1 (#910920W1.11208)	IBM PS/2 Model 80 (under AIX 1.1)	Same as Host
Verdix Corporation VADS MIPS = > MIPS R3000, VAda-110-62620, Version 6.1 (#910920W1.11209)	MIPS RC3230 (under RISC/os 4.52)	Lockheed Sanders STAR MVP (R3000) (bare machine)
Verdix Corporation VADS Sun-3 SunOS = > 68020/30 ARTX, VAda-110-13120, Version 6.0 (#910920W1.11210)	Sun-3/280 (under SunOS Release 4.0)	Motorola MVME147 (68030) (bare machine)
Verdix Corporation VADS Sun4 SunOS = > 68020/30 ARTX, VAda-110-40120, Version 6.0 (#910920W1.11211)	SPARCstation 2 (under SunOS Release 4.1.1)	Motorola MVME147 (68030) (bare machine)
*Validated by Registration Verdix Corporation VADS Sun4 SunOS = > 68020/30 ARTX, VAda-110-40120, Version 6.0 (BASE #910920W1.11211)	Sun Microsystems Sun-4, SPARCserver, & SPARCstation computer families (under SunOS 4.1)	Motorola MVME147 (68030) (bare machine)
Verdix Corporation VADS IBM RISC System/6000 AIX = > 68020/30 ARTX, VAda-110-71120, Version 6.0 (#910920W1.11212)	IBM RISC System/6000 Model 530 (under AIX 3.1)	Motorola MVME147 (68030) (bare machine)
*Validated by Registration Verdix Corporation VADS IBM RISC System/6000 AIX = > 68020/30 ARTX, VAda-110-71120, Version 6.0 (BASE #910920W1.11212)	IBM RISC System/6000 Models 320, 520, 540, 730, & 930 (under AIX 3.1)	Motorola MVME147 (68030) (bare machine)
Verdix Corporation VADS SYSTEM V/860 Release 4, VAda-110-9090, Version 6.1 (#910920W1.11213)	Okidata I860 Workstation (under UNIX SYSTEM V/860 RELEASE 4 v1.0)	Same as Host
Verdix Corporation VADS VMS = > AMD29000, VAda-110-03525, Version 6.04 (#910920W1.11214)	MicroVAX 3600 (under VMS 5.2)	Ironics IV9001 board (AMD 29000) (Am29000 bare VME machine)
*Validated by Registration Verdix Corporation VADS VAX VMS = > AMD 29K, VAda-110-03525, Version 6.04 (BASE #910920W1.11214)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 6000, VAX 8000, & VAX 9000 Series of computers (under VMS 5.3)	Ironics IV9001 board (AMD 29000) (Am29000 bare VME machine)
Verdix Corporation VADS Sun-3 SunOS = > AMD 29K, VAda-110-13525, Version 6.04 (#910920W1.11215)	Sun-3/180 (under SunOS 4.1.1)	Ironics IV9001 board (AMD 29000) (Am29000 bare VME machine)

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
*Validated by Registration Verdix Corporation VADS Sun-3 SunOS = > AMD 29K, VAda-110-13525, Version 6.04 (BASE #910920W1.11215)	Sun Microsystems Sun-3 computer family (under SunOS 4.1)	Ironics IV9001 board (AMD 29000) (Am29000 bare VME machine)
Wang Laboratories, Inc. Wang VS Ada Version 5.00.00 (#901129W1.11093)	Wang VS 8480 (under Wang VSOS 7.30.02)	Same as Host
*Validated by Registration Wang Laboratories, Inc. Wang VS Ada Version 5.00.00 (BASE #901129W1.11093)	Wang VS Models: 100, 300; 5430, 5440, 5450, 5460; 7010, 7110, 7120, 7150, 7310; 8220, 8230, 8260, 8430, 8460, 8470, 8480; 10050, 10075, 10100 (under all VS OS versions 7.21.xx & 7.30.xx)	Same as Host
York Software Engineering Limited York Ada Compiler Environment (ACE) Release 5 (#901127N1.11073)	Intergraph InterPro 3050 Workstation (under CLIX R3.1)	Same as Host
*Validated by Registration York Software Engineering Limited York Ada Compiler Environment (ACE) Release 5 (BASE #901127N1.11073)	Intergraph Mobile GIS/C2 (under CLIX Release 3.1)	Same as Host
*Validated by Registration York Software Engineering Limited York Ada Compiler Environment (ACE) Release 5 (BASE #901127N1.11073)	InterPro 125, 225, 340, 360, 2020, 3070, 6040, 6240, 6080 & 6280 (under CLIX Release 3.1)	Any Host
*Validated by Registration York Software Engineering Limited York Ada Compiler Environment (ACE) Release 5 (BASE #901127N1.11073)	InterView 220 & 3050 (under CLIX Release 3.1)	Any Host
*Validated by Registration York Software Engineering Limited York Ada Compiler Environment (ACE) Release 5 (BASE #901127N1.11073)	InterAct 220, 2020, 3050, 6040, 6080, 6240 & 6280 (under CLIX Release 3.1)	Any Host
*Validated by Registration York Software Engineering Limited York Ada Compiler Environment (ACE) Release 5 (BASE #901127N1.11073)	InterServe 200, 300, 2000, 3000, 4200, 5200, 6000, 6105 & 6505 (under CLIX Release 3.1)	Any Host

2.10 PASCAL PROCESSORS

VENDOR	PROCESSOR ID *VSR # & LEVEL*	HARDWARE & *OPERATING SYSTEM*	EXPIRY DATE	OTHER ENVIR *HW/OS*	NONCON-FORMITIES
Bull HN, Inc.	Pascal PCVS1.1 Version PCV1.1 Release 1.1 *NIST-91/1683* Level 0/1	DPS 90 *GCOS-8 Version SR4000*	6/1/92	DPS 8000, 9000 *GCOS-8 Version SR4000*	
Control Data Corporation	PASCAL/VE Version 1.7 Release 90337 *NIST-91/1434* Level 0/1	CYBER 180-995 *NOS/VE Version 1.5.3 Level 765*	6/1/92	Cyber 180 Ser; Cyber 2000 *NOS/VE Ver. 1.5.3 Level 765*	
Digital Equipment Corporation	VAX Pascal, Version 4.2 *NIST-91/2027* Level 0/1	VAX 6000-350 *VAX/VMS Version 5.4*	12/1/92	VAX 4000 Mod 200 300; 6000 Ser 200 300 400 500; 8200 8250 8300 8350 85xx 8600 8650 8700 8800 8810 8820 8830 8840; 9000 Md 210 Ser 400; VAXft 3000-310; VAX11/730/750/780/785; MicroVAX II 2000 3100 3300 3400 3500 3600 3800 3900; VAXstation II 2000 3100 3200 3500 3520 3540; VAXserver 3100 3300 3400 3500 3600 3602 3800 3900 4000 Md 200 300; 6000 Mod 210/220 310/320 410/420 510/520 *VMS Version 5.4*	
	DEC Pascal for Hercules/1 Version 1.2 *NIST-91/2028* Level 0/1	DECstation 5000-200 *Hercules/1*	12/1/92	DECstation 2100/3100; 500 models 100 & 200; 5000-125; 130; DECsystem 5100 *Hercules/1*	
	DEC Pascal for ULTRIX™ RISC Version 1.2 *NIST-91/2029* Level 0/1	DECstation 3100 *ULTRIX V4.2*	12/1/92	DECstation 130; 2100 /3100; 5000 mod 100 120/125 120/125CX 120/125PX 120/125 /PXG TURBO 200 200CX 200PX 200PXG 200PXG TURBO 245; DECsystems 3100 3100s 5100 5000 Model 200 5810 5820 5840 5400 5500 5900 *ULTRIX Versions 4.2 & 4.2A*	
Edinburgh Portable Compilers	Pascal-E Version 4.3.2 *PCVS/0092/UK* Level 0	ICL DRS 6000 *DRS/NX 6000 Version 4.0*	1/1/93		
	Pascal-E Version 4.3.2 *PCVS/0093/UK* Level 0	ICL DRS 3000 *DRS/NX 3000 Version 5.0*	1/1/93		
	Pascal-E Version 4.3.3 *PCVS/0091/UK* Level 0	PC/AT 80386 *Interactive UNIX Release 3.2.2*	1/1/93		

PASCAL PROCESSORS, *Continued*

VENDOR	PROCESSOR ID *VSR # & LEVEL*	HARDWARE & *OPERATING SYSTEM*	EXPIRY DATE	OTHER ENVIR HW/*OS*	NONCON-FORMITIES
Electronic Data Systems Corp.	SVS Pascal Version 2.8 *NIST-91/1401* Level 0	Everex AGI System 3000D *Interactive Unix V/386 Release 3.2*	5/1/92		
	SVS Pascal Version 2.8 *NIST-91/1402* Level 0	Prime EXL 320 *Prime Unix V/386 Release 3.1*	5/1/92		
IBM Canada LTD	IBM AIX XL PASCAL Compiler/6000 Version 1 Release 1 *NIST-91/1761* Level 0	IBM RISC System/6000 POWERstation 530 *AIX Version 3 for RISC System/6000 Version 3.1*	5/1/92	POWERstation 320, 520, 550, 730; POWERserver 320, 520, 530, 550, 730 *AIX Version 3 for RISC System/6000 Version 3.1*	
	IBM AIX XL PASCAL Compiler/6000 Version 1 Release 1 *NIST-92/1342* Level 0	IBM RISC System/6000 POWERstation 530 *IBM AIX Version 3 Release 2*	3/1/93	IBM RISC System/6000 Powerstation/ Powerserver 220, 320H, 340, 350, 520H, 530, 530E, 540, 550, 560, 560F, 730; Powerserver 930, 950 *AIX RISC System/6000 Version 3 Release 2*	
Intergraph Corporation	Pascal-CLIPPER Version 1.8.4A *NIST-92/1042* Level 0	CLIPPER IS4000 *CLIX Version 5.7.3*	12/1/92	CLIPPER C300 and C400 Series *CLIX Version 5.7.3*	Yes
Olivetti Systems & Networks	Olivetti Green Hills Pascal Version 1.2 *IMQ/PCVS-002/92* Level 0	Olivetti LSX 5010 *Olivetti Unix System V R4.0 Version 2*	1/10/93		
Siemens Nixdorf Information Systems AG	SNI Pascal-XT Version 2.1B *PCVS/0095/UK* Level 0/1	MX300-50 *SINIX-L Version 5.41*	2/1/93		
	SNI Pascal-XT Version 2.1B *PCVS/0097/UK* Level 0/1	RM600 *SINIX-P Version 5.41*	2/1/93		
	SNI Pascal-XT Version 2.1A *PCVS/0096/UK* Level 0/1	MX300 *SINIX-H Version 5.24*	2/1/93		
	SNI Pascal-XT Version 2.2A *PCVS/0094/UK* Level 0/1	H120-I 7.500 *BS2000 Version 10.0*	2/1/93		
Sun Microsystems, Inc.	Sun Pascal Version 2.1 *NIST-90/2321* Level 0/1	Sun 3/280 *SunOS, Version 4.1.1*	4/1/92	Sun 3/80, 470, 480, 50, 60, 150, 160, 260 *SunOS, Version 4.1.1*	
	Sun Pascal Version 2.1 *NIST-90/2322* Level 0/1	SPARCstation2 *SunOS, Version 4.1.1*	4/1/92	SPARCstation IPC, SLC, 1, 1 +, 330, 470 *SunOS, Version 4.1.1*	
	Sun Pascal Version 2.1 *NIST-90/2323* Level 0/1	SPARCserver 490 *SunOS, Version 4.1.1*	4/1/92		

PASCAL PROCESSORS, *Continued*

VENDOR	PROCESSOR ID *VSR # & LEVEL*	HARDWARE & *OPERATING SYSTEM*	EXPIRY DATE	OTHER ENVIR *HW/OS*	NONCON- FORMITIES
Unisys Corporation	A Series PASCAL83 Mark 4.0 *NIST-91/2213* Level 0	Unisys A10 *MCP/AS Mark 4.0*	10/1/92	Unisys A Series: Micro A, A1, A2, A3, A4, A5, A6, A9, A10, A12, A15, A16, A17, A19 *MCP/AS Mark 4.0*	

3. DATABASE LANGUAGE (SQL)

3.1 FIPS Database Language Standards

As specified by the FIPS, FIRMR and the associated Federal ADP and Telecommunications Standards Index, Federal agencies, when acquiring SQL processors, must assure that processors are in accordance with FIPS PUB 127-1, Database Language SQL.

3.2 Organization of Database Language Processor Entries

The entries in the VPL are a very limited extract from the Validation Summary Report (VSR) available from NIST. See 3.4 below.

The entries in the VPL for database language processors are presented as follows:

- The VENDOR ID column contains the name of the Vendor of the processor.
- The PROCESSOR ID column contains the name of the processor, its version number, the VSR number, and the Expiry date of the Notification of Registration.
- The INTERFACES & COMPILERS column contains the names of associated interactive SQL or programming language interfaces, and identification of the programming language compilers that interface with the SQL processor. A listing in the COMPILERS column is not an indication that the compiler has been validated for the applicable programming language standard. See the preceding "Programming Languages" Section for a list of validated compilers.
- The HARDWARE & OPERATING SYSTEM column presents the hardware and operating system environment used during the validation.
- The entries in the OTHER HW/OS & COMPILERS column include other hardware and operating system environments in which the processor operates, and the programming language compilers that interface with the SQL processor. The listings of the compilers and operating systems may contain a range of versions that are supported.
- The NONCONFORMITIES column lists the number of nonconformities for each interface tested (Ada, C, COBOL, Fortran, and Pascal). If a product supports both module language and embedded interfaces for a given programming language, then the programming language will be preceded by "Embedded" or "Module," as appropriate. Schema nonconformities are deficiencies in support for standard schema definition language constructs. "FIPS Flagger" in this column indicates that the mandatory FIPS Flagger requirement of FIPS 127-1 was not implemented. "IEF" nonconformities are deficiencies in the optional "Integrity Enhancement Feature" of FIPS 127-1. "Sizing" designates failure to support default minimum "Sizing for Database Constructs" specified under "Special Procurement Considerations" of FIPS 127-1. "Interactive" errors are deficiencies in the "Interactive SQL" interface defined in the "Special Procurement Considerations" section of FIPS 127-1. Refer to VSR for details. The number of nonconformities is only one limited measure of the quality of an SQL interface. It is more important to analyze the nature of each individual nonconformity and its impact on meeting user requirements.

3.3 Validation Requirements

The requirements for validation of database language processors are the same as those for programming language processors, listed in section 2.3.1.

3.4 Registered Report

A registered Validation Summary Report is issued for those SQL processors that have been tested and are considered to be in compliance with FIPS as specified by the FIPS, by the FIRMR, and the associated Federal ADP and Telecommunications Standards Index. VSRs are available from the Database and Graphics Group address below.

3.5 Validation Procedures and Test Suite

SQL processors are tested in accordance with procedures described in the NIST Language Processor Validation Procedures for SQL Validation Service (Trial Use Period). The current version of the SQL Validation System is Version 2.0.2 (2.1 for Ada). The validation procedures and test suite are available from:

National Institute of Standards and Technology (NIST)
Computer Systems Laboratory
Database and Graphics Group
Building 225, Room A266
Gaithersburg, MD 20899
Telephone (301) 975-3258, (301) 975-3267 (Voice)
(301) 590-0932 (FAX)

3.6 SQL PROCESSORS

VENDOR	PROCESSOR ID VSR # & EXPIRY DATE	INTERFACES & COMPILERS	HARDWARE & OPER. SYS.	OTHER HW/OS & COMPILERS	NONCON- FORMITIES
Digital Equipment Corporation	VAX Rdb/VMS Version 4.1 Pre-release NIST-91/7071 6/1/92 Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger	Embedded C Module C VAX C Version 3.0 Embedded COBOL Module COBOL VAX COBOL Version 4.4 Embedded Fortran Module Fortran VAX Fortran Version 5.0 Embedded Pascal Module Pascal VAX Pascal Version 4.1 Interactive SQL (FIPS Default)	VAXstation 3500; VAX 6220 VMS Version 5.4-2	VAX, MicroVAX, VAXstation VMS Versions 5.0-5.4 VAX C V 3.0 VAX COBOL V 4.2-4.4 VAX Fortran V 5.0-5.3 VAX Pascal V 3.9-4.1	
	VAX Rdb/VMS Version 4.1 Pre-release NIST-91/7072 10/1/92 Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger	Embedded Ada Module Ada VAX Ada Version 2.0	VAXstation 3500 VMS Version 5.4-2	VAX, MicroVAX, VAXstation VMS Versions 5.0-5.4 VAX Ada V2.0-2.2	
IBM Corporation	SQL/DS Version 3 Release 2 NIST-90/7021 1/1/93 Features Tested: Level 2 ANSI SQL FIPS Sizing Defaults FIPS Flagger	Embedded C IBM C/370 Version 1 Release 2 Embedded COBOL IBM VS COBOL II Version 1 Release 3.1 Embedded Fortran IBM VS Fortran Version 2 Release 4.0 Interactive SQL (FIPS Default)	IBM 3090 VM/XA SP Release 2	IBM 30xx, 43xx, 90xx, 93xx VM/ESA Release 1 VM/SP Release 6 VM/XA SP Release 2	
	SQL/DS Version 3 Release 2 NIST-90/7022 1/1/93 Features Tested: Level 2 ANSI SQL FIPS Sizing Defaults FIPS Flagger	Embedded COBOL IBM VS COBOL II Version 1 Release 3.2 Embedded Fortran IBM VS Fortran Version 1 Release 4.1 Interactive SQL (FIPS Default)	IBM 3090 VSE/ESA Release 1	IBM 30xx, 43xx, 90xx, 93xx VSE/ESA Release 1 VSE/SP Release 3 VSE/SP Release 4	
Informix Software Inc.	INFORMIX-OnLine Version 4.10 NIST-91/7031 2/1/93 Features Tested: Level 2 ANSI SQL FIPS Sizing Defaults FIPS Flagger	Schema Processor INFORMIX-SQL Version 4.00 Embedded C INFORMIX-ESQL/C Version 4.10 Sun C 4.1	Sun 4 Model 260 Sun OS 4.1	Sun Model 4/60, 4/100, 4/200; Sun Sparcserver 1, 1+, 330, 370, 390, 490; Sun Sparcstation 300, 330 Sun OS 4.1 Solbourne Series 4/601, 4/602, 4/603, 4/604, 5/601, 5/602, 5/604, 5/671, 5/672, 5/673, 5/674 OS/MP 4.0	1 C

SQL PROCESSORS, *Continued*

VENDOR	PROCESSOR ID VSR # & EXPIRY DATE	INTERFACES & COMPILERS	HARDWARE & OPER. SYS.	OTHER HW/OS & COMPILERS	NONCON- FORMITIES
	INFORMIX-OnLine Version 4.10 NIST-91/7032 2/1/93 Features Tested: Level 2 ANSI SQL FIPS Sizing Defaults FIPS Flagger	Schema Processor INFORMIX-SQL Version 4.00 Embedded C INFORMIX-ESQL/C Version 4.10 AT&T C 4.2	AT&T 3B2/700 Unix System V Release 3.2.1, Rev. 3	AT&T 3B2 300, 310, 400, 500, 600, 750 Unix System V Release 3.2.1, Rev. 3	1 C
	INFORMIX-OnLine Version 4.10 NIST-91/7033 2/1/93 Features Tested: Level 2 ANSI SQL FIPS Sizing Defaults FIPS Flagger	Schema Processor INFORMIX-SQL Version 4.00 Embedded C INFORMIX-ESQL/C Version 4.10 HPUX C	HP 9000/825 HP-UX Version A.B7.00	HP 9000/808, 808S, 815, 815S, 822, 825, 825S, 832, 834, 835, 835S, 835SE, 840, 842, 845, 845S, 850, 852, 855 HP-UX A.B7.00	1 C
	INFORMIX-OnLine Version 4.10 NIST-91/7034 2/1/93 Features Tested: Level 2 ANSI SQL FIPS Sizing Defaults FIPS Flagger	Schema Processor INFORMIX-SQL Version 4.00 Embedded C INFORMIX-ESQL/C Version 4.10 C 4.1	Prime EXL320 Unix System V 3.1		1 C
	INFORMIX-OnLine Version 4.10 NIST-91/7035 2/1/93 Features Tested: Level 2 ANSI SQL FIPS Sizing Defaults FIPS Flagger	Schema Processor INFORMIX-SQL Version 4.00 Embedded C INFORMIX-ESQL/C Version 4.10 Interactive C 4.1.5	INTEL WS3000 Interactive Unix System V 3.2.2	Compaq Systempro 486 Compaq Deskpro 386/25; 386/33; 486/25 MDL120; 486/25 MDL 320; 486/25 MDL650; 486/33; Data General Dasher 386/386SX Interactive Unix V/386 2.2 AT&T 6386; 6386/25; 6386/33 Unix System 3.2	1 C
	INFORMIX-ESQL/C Version AR4.00 NIST-91/7036 2/1/93 Features Tested: Level 2 ANSI SQL (single-user) FIPS Sizing Defaults FIPS Flagger	Schema Processor INFORMIX-SQL Version 4.00 Embedded C INFORMIX-ESQL/C Version AR4.00 Microsoft 6.0 C	Concord 386 MS-DOS 3.30	Compaq Deskpro 386/486 MS-DOS 3.30 IBM PC AT MS-DOS 4.0/3.30 Toshiba 3100 SX/3200 MS-DOS 4.01	14 C
	INFORMIX-OnLine Version 5.0 NIST-91/7037 5/1/92 Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger	Embedded C INFORMIX-ESQL/C Sun C as bundled with Sun OS 4.1.1 Interactive SQL (FIPS Default) INFORMIX DB-Access	Sun SPARCserver 470 Sun OS 4.1.1	Sun Model 4/60, 4/100, 4/200, 4/260; Sun Sparcserver 1, 1+, 330, 370, 390; Sun Sparcstation 300, 330 Sun OS 4.1 - 4.1.1	1 IEF Schema

SQL PROCESSORS, *Continued*

VENDOR	PROCESSOR ID VSR # & EXPIRY DATE	INTERFACES & COMPILERS	HARDWARE & OPER. SYS.	OTHER HW/OS & COMPILERS	NONCON- FORMITIES
	INFORMIX-OnLine Version 5.0 NIST-91/7038 5/1/92 Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger	Embedded C INFORMIX-ESQL/C C as bundled with ULTRIX 4.0 rev 179 Interactive SQL (FIPS Default) INFORMIX DB-Access	DECSYSTEM 3100 ULTRIX 4.0 rev 179	DECSYSTEM 3100, 5100, 5400, 5500, 5810, 5820, 5830, 5840; DECSTATION 2100, 3100, 5000-200 ULTRIX 4.0 rev 179	1 IEF Schema
	INFORMIX-OnLine Version 5.0 NIST-91/7039 5/1/92 Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger	Embedded C INFORMIX-ESQL/C C as bundled with Software Development System 4.1.5 Interactive SQL (FIPS Default) INFORMIX DB-Access	Zenith 386/33E SCO Unix System V 3.2	Altos Series 5000; Bull HN DPX/Prostation 25I, 25E; Compaq Deskpro 386/25, 20E; Deskpro 386/33, System Pro; Deskpro 386/SX; Deskpro 486/25 MDL 120, 123; Deskpro 486/33 System Pro M; Systempro MDL 485 Dual Proc.; Dec System 316+, 325, 333 SCO Unix System V 3.2	1 IEF Schema
	INFORMIX-OnLine Version 5.01 Pre-release NIST-92/7191 3/1/93 Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger	Embedded C INFORMIX-ESQL/C 5.00 Sun C as bundled with Sun OS 4.1.1 Module Ada INFORMIX-ADA/SAME 5.00 Verdix Ada 6.03 Interactive SQL (FIPS Default) INFORMIX DB-Access 5.00	Sun 4/60 Sun OS 4.1.1	Sun Model 4/60, 4/100, 4/200, 4/260; Sun Sparcserver 1, 1+, 330, 370, 390, 470; Sun Sparcstation 300, 330 Sun OS 4.1 - 4.1.1	
	INFORMIX-OnLine Version 5.01 Pre-release NIST-92/7195 3/1/93 Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger	Embedded Ada INFORMIX-ESQL/Ada 4.00 Verdix Ada 6.03	Sun 4/60 Sun OS 4.1.1	Sun Model 4/60, 4/100, 4/200, 4/260; Sun Sparcserver 1, 1+, 330, 370, 390, 470; Sun Sparcstation 300, 330 Sun OS 4.1 - 4.1.1	7 Embedded Ada
	INFORMIX-OnLine Version 5.0 NIST-92/7192 3/1/93 Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger	Embedded C INFORMIX-ESQL/C 5.00 C as bundled with ULTRIX 4.0 rev 179 Embedded Ada INFORMIX-ESQL/Ada 4.00 Verdix Ada 6.1 Module Ada INFORMIX-ADA/SAME 5.00 Verdix Ada 6.1 Interactive SQL (FIPS Default) INFORMIX DB-Access 5.00	DECSYSTEM 3100 ULTRIX 4.2 rev 96	DECSYSTEM 3100, 5100, 5400, 5500, 5810, 5820, 5830, 5840; DECSTATION 2100, 3100, 5000-200 ULTRIX 4.0 - 4.2	1 IEF Schema 7 Embedded Ada

SQL PROCESSORS, *Continued*

VENDOR	PROCESSOR ID VSR # & EXPIRY DATE	INTERFACES & COMPILERS	HARDWARE & OPER. SYS.	OTHER HW/OS & COMPILERS	NONCON- FORMITIES
	INFORMIX-OnLine Version 5.0 NIST-92/7193 3/1/93 Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger	Embedded C INFORMIX-ESQL/C 5.00 C as bundled with Software Development System 4.1.5 Embedded Ada INFORMIX-ESQL/Ada 4.00 Verdix Ada 6.1 Module Ada INFORMIX-ADA/SAME 5.00 Verdix Ada 6.1 Interactive SQL (FIPS Default) INFORMIX DB-Access 5.00	Zenith Z-486/25E SCO Unix System V 3.2	Altos Series 5000; Bull HN DPX/Prostation 25I, 25E; Compaq Deskpro 386/25, 20E; Deskpro 386/33, System Pro; Deskpro 386/SX; Deskpro 486/25 MDL 120, 123; Deskpro 486/33 System Pro M; Systempro MDL 485 Dual Proc.; Dec System 316+, 325, 333 SCO Unix System V 3.2	1 IEF Schema 7 Embedded Ada
	INFORMIX-OnLine/Secure Version 4.10 Pre-release NIST-92/7194 3/1/93 Features Tested: Level 2 ANSI SQL FIPS Sizing Defaults FIPS Flagger	Embedded C INFORMIX-ESQL/C Version 4.10 Sun C 4.1 Interactive SQL (FIPS Default) INFORMIX DB-Access 4.10	Sun 4 Model 260 Sun OS 4.1.1	Sun Model 4/60, 4/100, 4/200; Sun Sparcserver 1, 1+, 330, 370, 390, 490; Sun Sparcstation 300, 330 Sun OS 4.1.1 Sun C 4.1.1 Solbourne Series 4/601, 4/602, 4/603, 4/604, 5/601, 5/602, 5/604, 5/671, 5/672, 5/673, 5/674 OS/MP 4.0 Solbourne C4.0	1 C
Oracle Systems Corporation	ORACLE RDBMS Version 7.0 Pre-release NIST-91/7137 10/1/92 Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger	Embedded Ada Pro*Ada Version 1.5 Verdix Ada Version 6.1.0 Embedded C Pro*C Version 1.5 Gnu C 3.2.1.3 Interactive SQL (FIPS Default) SQL*DBA Version 7.0	Data General AViiON 5220 DG/UX Release 5.4 AViiON	Data General AViiON: AV100, AV210, AV310CD, AV410, AV530, AV4100, AV4120, AV4600, AV4620, AV5200, AV5225, AV5240, AV5520, AV6200, AV6200-20, AV6225, AV6225-20, AV6240, AV6240-20, AV7000, AV8000 DG/UX Release 5.4 AViiON	
	ORACLE RDBMS Version 7.0 Pre-release NIST-91/7051 10/1/92 Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger	Embedded C Pro*C Version 1.5 VAX C Version 3.1 Embedded COBOL Pro*COBOL Version 1.5 VAX COBOL Version 4.2 Embedded Fortran Pro*Fortran Version 1.5 VAX Fortran Version 5.2 Embedded Pascal Pro*Pascal Version 1.5 VAX Pascal Version 3.9 Interactive SQL (FIPS Default) SQL*DBA Version 7.0	DEC VAX 6560 VMS Version 5.4	VAX, MicroVAX, VAXStation VMS Versions 5.0 - 5.4	

SQL PROCESSORS, *Continued*

VENDOR	PROCESSOR ID VSR # & EXPIRY DATE	INTERFACES & COMPILERS	HARDWARE & OPER. SYS.	OTHER HW/OS & COMPILERS	NONCON- FORMITIES
	ORACLE RDBMS Version 7.0 Pre-release NIST-91/7131 10/1/92 Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger	Embedded Ada Pro*Ada Version 1.5 VAX Ada Version 2.1	DEC VAX 6560 VMS Version 5.4	VAX, MicroVAX, VAXStation VMS Versions 5.0 - 5.4	
	ORACLE RDBMS Version 6.0 NIST-91/7052 4/1/93 Features Tested: Level 2 ANSI SQL FIPS Sizing Defaults	Embedded C Pro*C Version 1.4 VAX C Version 3.1 Embedded COBOL Pro*COBOL Version 1.4 VAX COBOL Version 4.2 Embedded Fortran Pro*Fortran Version 1.4 VAX Fortran Version 5.2 Embedded Pascal Pro*Pascal Version 1.4 VAX Pascal Version 3.9 Interactive SQL (FIPS Default) SQL*DBA Version 6.0 SQL*Plus Version 3.0	DEC VAX 6560 VMS Version 5.4	VAX, MicroVAX, VAXStation VMS Versions 4.6 - 5.4	2 Schema 14 C 11 COBOL 11 Fortran 11 Pascal 9 Interactive FIPS Flagger
	ORACLE RDBMS Version 6.0 NIST-91/7132 10/1/92 Features Tested: Level 2 ANSI SQL FIPS Sizing Defaults	Embedded Ada Pro*Ada Version 1.4 VAX Ada Version 2.1	DEC VAX 6560 VMS Version 5.4	VAX, MicroVAX, VAXStation VMS Versions 4.6 - 5.4	2 Schema 11 Ada FIPS Flagger
	ORACLE RDBMS Version 7.0 Pre-release NIST-91/7133 10/1/92 Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger	Embedded Ada Pro*Ada Version 1.5 HP Ada 800 Version A.04.35 Embedded C Pro*C Version 1.5 HP C Version A.07.10 Interactive SQL (FIPS Default) SQL*DBA Version 7.0	Hewlett-Packard 9000/87 HP-UX Version A.07.05	HP 9000/700 Series and HP 9000/800 Series HP-UX Version A.07.05	

SQL PROCESSORS, *Continued*

VENDOR	PROCESSOR ID VSR # & EXPIRY DATE	INTERFACES & COMPILERS	HARDWARE & OPER. SYS.	OTHER HW/OS & COMPILERS	NONCON- FORMITIES
	ORACLE RDBMS Version 6.0 NIST-91/7134 10/1/92 Features Tested: Level 2 ANSI SQL FIPS Sizing Defaults	Embedded Ada Pro*Ada Version 1.4 HP Ada 800 Version A.04.35 Embedded C Pro*C Version 1.4 HP C Version A.07.10 Embedded COBOL Pro*COBOL Version 1.4 Micro Focus COBOL/2 Version 1.1 Rev.2 Embedded FORTRAN Pro*FORTRAN Version 1.4 HP FORTRAN 77 Version A.07.00 Interactive SQL (FIPS Default) SQL*DBA Version 6.0 SQL*Plus Version 3.0	Hewlett-Packard 9000/87 HP-UX Version A.07.05	HP 9000/700 Series and HP 9000/800 Series HP-UX Version A.07.05	2 Schema 11 Ada 14 C 11 COBOL 11 FORTRAN 9 Interactive FIPS Flagger
	ORACLE RDBMS Version 7.0 Pre-release NIST-91/7135 10/1/92 Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger	Embedded Ada Pro*Ada Version 1.5 Verdix Ada Version 6.0 Rev.3 Embedded C Pro*C Version 1.5 Sun ANSI C Version 1.0 Interactive SQL (FIPS Default) SQL*DBA Version 7.0	Sun SPARCstation 1 Sun OS 4.1.1	Sun SPARCstation 300, 330; Sun SPARCserver 1, 1+, 330, 370, 390 Sun OS 4.1 - 4.1.1	
	ORACLE RDBMS Version 6.0 NIST-91/7136 10/1/92 Features Tested: Level 2 ANSI SQL FIPS Sizing Defaults	Embedded Ada Pro*Ada Version 1.4 Verdix Ada Version 6.0 Rev.3 Embedded C Pro*C Version 1.4 Sun C as bundled with Sun OS 4.1.1 Interactive SQL (FIPS Default) SQL*DBA Version 6.0 SQL*Plus Version 3.0	Sun SPARCstation 1 Sun OS 4.1.1	Sun SPARCstation 300, 330; Sun SPARCserver 1, 1+, 330, 370, 390 Sun OS 4.1 - 4.1.1	2 Schema 11 Ada 14 C 9 Interactive FIPS Flagger
ShareBase Corporation	ShareBase III Release 1 NIST-90/7001 6/1/92 Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults	Embedded C Sun UNIX C 4.2 Release 3.4	Client: Sun 3/50 Sun OS 4.2 Release 3.5 Server: Server/8000 Sharebase III Release 1	Client: Sun 3/60 Sun OS 4.2 Release 3.5 Server: Server/8000 ShareBase III Release 1	FIPS Flagger
Unisys Corporation	SQLDB Mark 3.9 NIST-90/7011 1/1/93 Features Tested: Level 2 ANSI SQL FIPS Sizing Defaults FIPS Flagger	Module COBOL A Series COBOL ANSI-85, Version 2.0	Unisys A15 Model H MCP/AS Mark 3.9	Unisys Micro A, A1, A2, A3, A4, A5, A6, A9, A10, A12, A15, A16, A17, A19 MCP/AS Mark 3.9	

SQL PROCESSORS, *Continued*

VENDOR	PROCESSOR ID VSR # & EXPIRY DATE	INTERFACES & COMPILERS	HARDWARE & OPER. SYS.	OTHER HW/OS & COMPILERS	NONCON- FORMITIES
	SQLDB Mark 4.0 Pre-release NIST-91/7111 10/1/92 Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger	Module COBOL A Series COBOL ANSI-85, Mark 4.0	Unisys A15 Model H MCP/AS Mark 4.0	Unisys Micro A, A1, A2, A3, A4, A5, A6, A9, A10, A12, A15, A16, A17, A19 MCP/AS Mark 3.9 - 4.0	

4. GKS CONFORMANCE TESTING

4.1 FIPS GKS Standards

The Graphical Kernel System (GKS) is a two-dimensional graphics tool box which provides for the display and manipulation of pictures and graphical input from the operator. The purpose of GKS is to promote portability of graphics applications for use on a variety of graphics workstations. It provides a functional interface between an application program and a configuration of graphical devices. The interface is at such a level of abstraction that hardware peculiarities are shielded from the application program.

GKS is the first Federal Information Processing Standard Publication (FIPS PUB) registered for computer graphics systems as FIPS PUB 120-1. In accordance with FIPS PUB 120-1, two-dimensional graphics toolbox packages acquired for Federal use after November 3, 1986 should implement FIPS GKS. Conformance testing of GKS implementations protects Federal investment by ensuring adherence to the graphics standard. FIPS PUB 120-1 requires that GKS implementations offered to Federal agencies be tested using the NIST Test Suite to ensure that a particular implementation meets the specifications of the FIPS. The GKS Validation Test Suite (Fortran) is available from:

Ms. Susan Sherrick
National Institute of Standards and Technology
Building 225, Room A266
Gaithersburg, MD 20899
(301) 975-3268

4.2 Organization of GKS Entries

The entries in the VPL for GKS implementations are presented as follows:

- The VENDOR ID column contains the name of the Vendor of the implementation.
- The GKS NAME column contains the name of the implementation, its version number, the VSR number, and the Expiry date of the certificate of validation.
- The HARDWARE & OP. SYSTEM column presents the hardware and operating system environment used during the validation.
- The GRAPHICS DEVICES column includes the graphics devices that were validated.
- The GKS LEVEL column indicates the level of GKS that was validated.
- The entries in the OTHER HW/OS column include other hardware and operating system environments in which the processor operates.
- The NONCONFORMITIES column indicates whether or not the GKS implementation conforms to the applicable FIPS in one or more cases as evidenced by the validation. The VSR should be reviewed for details of the nonconformities.

GKS PROCESSORS

VENDOR	GKS NAME EXPIRY & VSR #	HARDWARE & OP. SYSTEM	GRAPHICS DEVICES	GKS LEVEL	OTHER HW/OS	NONCON- FORMITIES
Advanced Technology Center	GRAFPAK-GKS Release 3.30.01 9/1/92 NIST/NCC-91/950	IBM RS/6000 Model 320 AIX 3.1	X Window System V11 PostScript Portrait Oriented Workstation	2C including GKSM Input, GKSM Output, and Workstation Independent Segment Storage		Yes
Rutherford Appleton Laboratory	RAL GKS V1.34 5/1/92 NIST/NCC-91/949	Sun 3/60 SUNOS Release 4.0.3	PostScript Portrait Oriented Workstation Sun 3/60 Monochrome Workstation running SunView Tektronix 4014-1	2B including RAL GKSM Input, RAL GKSM Output, and Workstation Independent Segment Storage		No

5. CGM CONFORMANCE TESTING

5.1 FIPS CGM Standards

The Computer Graphics Metafile (CGM) is a data interchange standard suitable for the storage and retrieval of picture information in a device independent manner. The purpose of the CGM is to facilitate the transfer of graphical information among different computer systems, devices and/or applications.

In accordance with FIPS 128 and Military Specification MIL-D-28003, the delivery of two-dimensional picture information to the government should be in the digital format of the CGM. Conformance testing verifies that the CGM is syntactically and semantically correct. The NIST CGM Test Suite tests the degree to which a binary encoded CGM complies with FIPS 128 and MIL-D-28003.

5.2 CGM Test Labs and Test Suite

CGM Validation Testing is available from the National Institute of Standards and Technology through its Computer Systems Laboratory (NIST/CSL).

The CGM Validation Test Software is based on CTS/Metacheck, version 2.06 and is available for purchase from:

Advanced Technology Center
22982 Mill Creek Drive
Laguna Hills CA 92653
(714) 583-9119

5.3 Registered Report

A Registered Report of CGM Conformance is issued for those CGM files that have been tested and are in compliance with FIPS 128 and/or the Military Specification MIL-D-28003.

5.4 Validation Procedures and Test Suite

CGM files are tested in accordance with procedures described in the NIST Procedures for CGM Testing (Trial Use Period). The current version of the Validation Test Software is Version 2.06. The validation procedures and information pack are available from:

National Institute of Standards and Technology (NIST)
Computer Systems Laboratory
CGM Test Service
Room A266 Technology Building
Gaithersburg, MD 20899
Telephone (301) 975-3265

5.5 Organization of CGM Entries

The entries in the VPL for CGM are presented as follows:

- The CLIENT ID column contains the name of Client submitting the CGMs.
- The GENERATOR column contains the name and version number of the CGM Generator that produced the CGM files.
- The REGISTERED REPORT NUMBER and DATE column contains the Registered Report Number and Date for the validated CGM files.
- The CGM FILES column contains the name and date of the CGM files that conform to FIPS 128 and are contained in the Registered Report.

6. U.S. GOSIP TESTING PROGRAM REGISTER DATABASE SYSTEM (GRD)

DESCRIPTION

The United States Government Open Systems Interconnection Profile (GOSIP) Testing Program was defined to assist Federal Agencies in assuring conformance to the GOSIP Standard. Testing for conformance to the Open Systems Interconnection (OSI) standards and for interoperability with other OSI implementations is available.

NISTIR 4594, "GOSIP Conformance and Interoperation Testing and Registration" establishes the framework for the establishment of registers for Test Suites, Test Systems (Means of Testing), Conformance Testing Laboratories, and Interoperability Testing Services.

U.S. GOSIP REGISTER DATABASE (GRD)

The U.S. GOSIP Register Database (GRD) is an online database facility developed by NIST. It provides up-to-date reference information for the following list of registers:

1. U.S. GOSIP Abstract Test Suites (ATS).
2. Assessed Means of Testing (MOT).
3. NVLAP Accredited Test Laboratories.
4. Conformance Tested GOSIP Products.
5. Interoperability Test Suites (ITS) for OSI Products.
6. Reference Entities for Means of Testing Assessment(s).
7. Interworking GOSIP Products.
8. Interoperability Test and Registration Services.

These registers are fully described in the GRD.

HOW TO ACCESS THE GOSIP REGISTER DATABASE (GRD)

The GRD can be accessed in two ways.

1. Using the Internet address 129.6.48.100 and logging on under the user-name "gosip-db". No password is necessary.

2. Via a modem by dialing the phone number (301) 869-0096. Log in using the user-name "gosip-db". No password is necessary. (Recommended modem configuration is 8-bits, 1 stop bit, no parity and baud rates of 1200 or 2400 speed.)

Currently, when using a modem, the GRD system allows for two simultaneous users only. If connection is not established please hang up and try again later.

Once connected the user will immediately be put into an introduction screen. After hitting the return key, a screen is presented to allow the user to select the appropriate terminal type. Enter the corresponding number from the list provided. After this the user is put into the main application menu. It is recommended to read the help option ("GRD Operation Information") first before performing any

queries. The "GRD Operation Information" option is option three of the main menu. Option four, "U.S. GOSIP Register Information", gives general information about the U.S. GOSIP Testing Program and the contents of the registers. Option five, "Register Directory", lists the registers and in turn allows the user to perform queries on the register contents.

For any questions, problems or comments dealing with the GRD or the U.S. GOSIP Testing Program please contact:

Ken Thomas
Joint Interoperability Test Center - TCBB
Fort Huachuca, AZ 85613-7020
(602) 538-5170
e-mail: C3A-TCB@huachuca-EMH2.army.mil

7. NIST POSIX CONFORMANCE TESTING

7.1 FIPS POSIX Standard

The National Institute of Standards and Technology through its Computer Systems Laboratory (NIST/CSL), has established a Conformance Testing policy for the Federal Information Standard for POSIX (FIPS 151-1). This standard is based on the IEEE POSIX Std 1003.1-1988. The testing model is made up of a Certification Authority, Accredited Testing Laboratories, Clients, and the official NIST POSIX Conformance Test Suite (NIST-PCTS). The Certification Authority is under the auspices of the Director of NIST/CSL. Testing labs are accredited by the National Voluntary Laboratory Accreditation Program (NVLAP), also an arm of NIST. The test suite is the NIST-PCTS:151-1 developed at NIST/CSL, and is based on the test assertions specified by the IEEE 1003.3 working group on test methods.

7.2 POSIX Test Procedures

There are eight POSIX test labs accredited by NVLAP to do POSIX testing. NVLAP accreditation is renewable after one year, and identifies the specific testing procedures which the lab is authorized to run. The labs provide testing and analysis services to their Clients, and may forward the final test results to NIST/CSL for evaluation and subsequent issuance of a Certificate of Validation by NIST/CSL. The POSIX Conformance testing procedures/requirements are published in the following documents:

a. "NIST POSIX Testing Policy General Information" Version 4.0, January 22, 1992.

b. "NIST POSIX Testing Policy Certificate of Validation Requirements, #1 - FIPS 151-1."

7.3 POSIX Test Suite

The NIST-PCTS is available from the National Technical Information Services (NTIS), 5825 Port Royal Road, Springfield, VA 22161, (703) 487-4650, for $2500 in the U.S. It will be the base PCTS for the life of FIPS 151-1. Occasional fixes to the PCTS will be made by NIST/CSL. These "fixes" are automatically sent to the accredited labs, and will be available from NIST/CSL to all owners of the NIST/PCTS:151-1.

7.4 Validation Requirements

An accredited lab may submit a "clean" test report to NIST/CSL for evaluation in anticipation of a Certificate of Validation being issued. "Clean" implies no test assertion failures. However, recognizing that errors could exist in either the FIPS 151-1, the test assertions in IEEE 1003.3, or in the NIST-PCTS, any "failures" must be resolved to acceptable "Resolved Test Codes" as listed in the NIST test method documentation. The Certificate of Validation will confirm that the stated product has been tested using the official NIST-PCTS and that the test results have been validated by NIST/CSL. It will contain information on the product tested, the hardware/software environment used for testing, supplier, testing lab, and the PCTS. Additional information on conditional features supported, configuration details, and resolved test codes will be available from NIST/CSL as referenced by a file number on the Certificate. These certificates will be issued by NIST/CSL through the testing lab. Fees for services by the testing labs will be established by the respective labs.

7.5 NIST POSIX TESTING LABORATORIES

The National Voluntary Laboratory Accreditation Program (NVLAP) has accredited the following laboratories to test computer operating system interfaces for conformance with the Federal Information Processing Standard 151-1 (FIPS 151-1) using the NIST POSIX Conformance Test Suite (NIST-PCTS:151-1). Only accredited laboratories may submit test reports to NIST/CSL for validation.

Applications Software Incorporated
1656 Gryc Court
Mendota Heights, MN 55118

Contact: Mr. Robin Ehrlich
Phone: 612-456-5364

BULL SA / Laboratoire POSIX
1 rue de Provence / BP208
38432 ECHIROLLES CEDEX (France)

Contact: Mr. Georges Chardon
Phone: (33) 76 39 75 93

DataFocus Incorporated
12500 Fair Lakes Circle, Suite 160
Fairfax, VA 22033-3821

Contact: Mr. James Hegerty
Phone: 703-631-6770

Hewlett-Packard Company
Hewlett-Packard POSIX Conformance Test Center
250 Apollo Drive
Chelmsford, MA 01824

Contact: Ms. Linda DeYoung
Phone: 508-256-6600

Mindcraft, Inc.
410 Cambridge Avenue
Palo Alto, CA 94306

Contact: Mr. Bruce Weiner
Phone: 415-323-9000

National Computing Centre Ltd
Oxford Road
Manchester, M1 7ED, ENGLAND

Contact: Ms. A. E. J. Pink
Phone: +44 61 228-6333

PERENNIAL
4699 Old Ironsides Drive, Suite 210
Santa Clara, CA 95054

Contact: Mr. Barry E. Hedquist
Phone: 408-748-2900

UniSoft Corporation
6121 Hollis Street
Emeryville, CA 94608-2092

Contact: Ms. Barb Moran
Phone: 510-420-6400

7.6 NIST POSIX VALIDATED PRODUCTS

The following products have been tested by an Accredited POSIX Testing Laboratory (APTL) using the official National Institute of Standards and Technology POSIX Conformance Test Suite (NIST-PCTS:151-1) for the Federal Information Processing Standards Publication 151-1 (FIPS PUB 151-1). A Certificate of Validation has been issued by NIST/CSL.

Additional information is available from NIST/CSL on conditional features supported, configuration details, and resolved test codes (if appropriate).

PRODUCT SUPPLIERS	REFERENCE FILE #
Apple Computer Inc.	APP2482, APP7235, APP8616
AT&T	ATT1566
Control Data Corporation	CDC1101, CDC5574, CDC5750
Data General Corporation	DGC2542, DGC8016, DGC8703, DGC9391
Digital Equipment Corporation	DEC0638, DEC5794, DEC7917, DEC9418, DEC9672
Encore Computer Corporation	ENC6897
Harris Corporation	HAR5240
Hewlett-Packard Company	HPC2540, HPC9185
Interactive Systems Corp.	INT5154
International Business Machines Inc.	IBM0320, IBM0458, IBM1344, IBM2592, IBM3697
Santa Cruz Operation Inc.	SCO5199, SCO6748, SCO9875
Sequent Computer Systems Inc.	SEC8754
SunSoft, Inc.	SUN6635, SUN9763
UNISYS Corporation	UNI9080
UNIX System Laboratories	USL3610

SYSTEM SUPPLIERS	REFERENCE FILE #
Apple Computer Inc.	APP2482, APP7235, APP8616
AT&T	ATT1566, USL3610
Compaq Computer Corporation	INT5154
Control Data Corporation	CDC1101, CDC5574, CDC5750
Data General Corporation	DGC2542, DGC8016, DGC8703, DGC9391, SCO6748
Digital Equipment Corporation	DEC0638, DEC5794, DEC7917, DEC9418, DEC9672
Encore Computer Corporation	ENC6897
Harris Corporation	HAR5240
Hewlett-Packard Company	HPC2540, HPC9185
International Business Machines Inc.	IBM0320, IBM0458, IBM1344, IBM2592, IBM3697
Sequent Computer Systems Inc.	SEC8754
Sun Microsystems Computer Corp., Inc.	SUN6635, SUN9763
UNISYS Corporation	UNI9080, SCO9875
Zenith Data Systems	SCO5199

NIST POSIX VALIDATED PRODUCTS, *Continued*

Reference File #: APP2482
Product Supplier: Apple Computer Inc.
Product Tested: A/UX Version: 2.0.1 Release: 01/30/1991
System Supplier: Apple Computer Inc.
System Hardware: Macintosh Model: IIfx
C Compiler: A/UX native C compiler (cc) Version: 1.21 Release: 01/13/1991
PCTS: 151-1 Version: 1.1 - 04/26/91
APTL: 0342 Mindcraft, Inc. Date Issued: 05/24/91

Reference File #: APP7235
Product Supplier: Apple Computer Inc.
Product Tested: A/UX Version: 2.0.1 Release: 01/30/1991
System Supplier: Apple Computer Inc.
System Hardware: Macintosh Model: IIci
C Compiler: A/UX native C compiler (cc) Version: 1.21 Release: 01/13/1991
PCTS: 151-1 Version: 1.1 - 04/26/91
APTL: 0342 Mindcraft, Inc. Date Issued: 05/24/91

Reference File #: APP8616
Product Supplier: Apple Computer Inc.
Product Tested: A/UX Version: 2.0.1 Release: 01/30/1991
System Supplier: Apple Computer Inc.
System Hardware: Macintosh Model: IIsi
C Compiler: A/UX native C compiler (cc) Version: 1.21 Release: 01/13/1991
PCTS: 151-1 Version: 1.1 - 04/26/91
APTL: 0342 Mindcraft, Inc. Date Issued: 05/24/91

Reference File #: ATT1566
Product Supplier: AT&T
Product Tested: AT&T UNIX System V Version: Release 4 Release: 4.0.3
System Supplier: AT&T
System Hardware: AT&T 3B2 R3 Series Model: 3B2/600 GR
C Compiler: AT&T 3B2/RISC C Development System Version: 1.0
PCTS: 151-1 Version: 1.1 - 09/11/91
APTL: 0343 DataFocus Incorporated Date Issued: 11/06/91

Reference File #: CDC1101
Product Supplier: Control Data Corporation
Product Tested: EP/IX Version: 1.4.2 Release: November 27, 1991
System Supplier: Control Data Corporation
System Hardware: Control Data 4000 Model: 4680MP
C Compiler: EP/IX C Language RISCompiler Version: C 2.11 Release: July 1990
PCTS: 151-1 Version: 1.1 - 09/11/91
APTL: 0356 Applications Software Incorporated Date Issued: 01/29/92

Reference File #: CDC5574
Product Supplier: Control Data Corporation
Product Tested: EP/IX Version: 1.3.1 Release: 03/21/1991
System Supplier: Control Data Corporation
System Hardware: Control Data 4000 Model: 4330-250
C Compiler: EP/IX C Language RISCompiler Version: 2.11 Release: July 1990
PCTS: 151-1 Version: 1.1 - 04/26/91
APTL: 0356 Applications Software Incorporated Date Issued: 05/24/91

NIST POSIX VALIDATED PRODUCTS, *Continued*

Reference File #: CDC5750
Product Supplier: Control Data Corporation
Product Tested: EP/IX Version: 1.3.1 Release: 03/21/1991
System Supplier: Control Data Corporation
System Hardware: Control Data 4000 Model: 4680
C Compiler: EP/IX C Language RISCompiler Version: 2.11 Release: 07/16/1990
PCTS: 151-1 Version: 1.1 - 04/26/91
APTL: 0356 Applications Software Incorporated Date Issued: 05/24/91

Reference File #: DEC0638
Product Supplier: Digital Equipment Corporation
Product Tested: VMS Version: 5 Release: 5 (with VMS POSIX, version 1.0)
System Supplier: Digital Equipment Corporation
System Hardware: VAXstation Model: 3100 M76
C Compiler: VAX C Version: 3 Release: 2
PCTS: 151-1 Version: 1.1 - 09/11/91
APTL: 0343 DataFocus Incorporated Date Issued: 01/29/92

Reference File #: DEC5794
Product Supplier: Digital Equipment Corporation
Product Tested: ULTRIX Version: 4.2 Release: May 31, 1991
System Supplier: Digital Equipment Corporation
System Hardware: VAXstation II Model: GPX
C Compiler: pcc Version: 4.2
PCTS: 151-1 Version: 1.1 - 04/26/91
APTL: 0342 Mindcraft, Inc. Date Issued: 06/17/91

Reference File #: DEC7917
Product Supplier: Digital Equipment Corporation
Product Tested: the ULTRIX Operating System Version: 4.2A Release: November 18, 1991
System Supplier: Digital Equipment Corporation
System Hardware: DECstation Model: 3100
C Compiler: MIPS C Compiler Version: 2.10
PCTS: 151-1 Version: 1.1 - 09/11/91
APTL: 0342 Mindcraft, Inc. Date Issued: 12/06/91

Reference File #: DEC9418
Product Supplier: Digital Equipment Corporation
Product Tested: ULTRIX Version: 4.2 Release: May 31, 1991
System Supplier: Digital Equipment Corporation
System Hardware: DECstation Model: 3100
C Compiler: MIPS C Compiler Version: 2.10
PCTS: 151-1 Version: 1.1 - 04/26/91
APTL: 0342 Mindcraft, Inc. Date Issued: 06/17/91

Reference File #: DEC9672
Product Supplier: Digital Equipment Corporation
Product Tested: The ULTRIX Operating System Version: 4.2A Release: December 1991
System Supplier: Digital Equipment Corporation
System Hardware: DECstation Model: 5000/200
C Compiler: MIPS C Compiler Version: 2.10
PCTS: 151-1 Version: 1.1 - 09/11/91
APTL: 0342 Mindcraft, Inc. Date Issued: 02/12/92

NIST POSIX VALIDATED PRODUCTS, *Continued*

Reference File #: DGC2542
Product Supplier: Data General Corporation
Product Tested: DG/UX Version: 5.4
System Supplier: Data General Corporation
System Hardware: AViion 5000 Model: AV/5240
C Compiler: GNU C Compiler for AViiON Systems Version: 1.37.23
PCTS: 151-1 Version: 1.1 - 07/01/91
APTL: 0342 Mindcraft, Inc. Date Issued: 09/10/91

Reference File #: DGC8016
Product Supplier: Data General Corporation
Product Tested: DG/UX Version: 5.4
System Supplier: Data General Corporation
System Hardware: AViion 400/4000 Model: AV/4100
C Compiler: GNU C Compiler for AViiON Systems Version: 1.37.23
PCTS: 151-1 Version: 1.1 - 07/01/91
APTL: 0342 Mindcraft, Inc. Date Issued: 09/10/91

Reference File #: DGC8703
Product Supplier: Data General Corporation
Product Tested: DG/UX Version: 5.4
System Supplier: Data General Corporation
System Hardware: AViion 400/4000 Model: AV/412
C Compiler: GNU C Compiler for AViiON Systems Version: 1.37.23
PCTS: 151-1 Version: 1.1 - 07/01/91
APTL: 0342 Mindcraft, Inc. Date Issued: 09/10/91

Reference File #: DGC9391
Product Supplier: Data General Corporation
Product Tested: DG/UX Version: 4.32
System Supplier: Data General Corporation
System Hardware: AViion AV/400/4000 Model: AV/410
C Compiler: GNU C Compiler for AViion Sys Version: 1.37.23
PCTS: 151-1 Version: 1.1 - 04/26/91
APTL: 0342 Mindcraft, Inc. Date Issued: 05/24/91

Reference File #: ENC6897
Product Supplier: Encore Computer Corporation
Product Tested: UMAX V Release: 3.0.6
System Supplier: Encore Computer Corporation
System Hardware: 91 Series Model: 91-02427
C Compiler: Green Hills Software, Inc. C Release: 1.1
PCTS: 151-1 Version: 1.1 - 01/22/92
APTL: 0345 UniSoft Corporation Date Issued: 3/12/92

Reference File #: HAR5240
Product Supplier: Harris Corporation
Product Tested: CX/UX Release: 5.3
System Supplier: Harris Corporation, Computer Systems Division
System Hardware: Night Hawk Model: HN4802
C Compiler: Harris C Compiler Release: 5.3
PCTS: 151-1 Version: 1.1 - 09/11/91
APTL: 0342 Mindcraft, Inc. Date Issued: 12/16/91

NIST POSIX VALIDATED PRODUCTS, *Continued*

Reference File #: HPC2540
Product Supplier: Hewlett-Packard Company
Product Tested: HP-UX Version: 8.07 Release: December 1991
System Supplier: Hewlett-Packard Company
System Hardware: HP9000 Series 700 Model: 720
C Compiler: HP C Compiler Version: A 08.71 Release: December 1991
PCTS: 151-1 Version: 1.1 - 09/11/91
APTL: 0346 Hewlett-Packard POSIX Conformance Test Center Date Issued: 01/29/92

Reference File #: HPC9185
Product Supplier: Hewlett-Packard Company
Product Tested: HP-UX Version: 8 Release: 5/6/91
System Supplier: Hewlett-Packard Company
System Hardware: HP9000 Series 800 Model: 835
C Compiler: HP C Compiler Version: A 08.17 Release: 5/6/91
PCTS: 151-1 Version: 1.1 - 09/11/91
APTL: 0346 Hewlett-Packard POSIX Conformance Test Center Date Issued: 12/18/91

Reference File #: IBM0320
Product Supplier: International Business Machines Inc.
Product Tested: AIX Version 3 for RISC System/6000 Version: 3 Release: 2
System Supplier: International Business Machines Inc.
System Hardware: RISC System/6000 Model: 220
C Compiler: xlc Version: 1 Release: 2
PCTS: 151-1 Version: 1.1 - 01/22/92
APTL: 0342 Mindcraft, Inc. Date Issued: 02/25/92

Reference File #: IBM0458
Product Supplier: International Business Machines Inc.
Product Tested: AIX Version 3 for RISC System/6000 Version: 3 Release: 2
System Supplier: International Business Machines Inc.
System Hardware: RISC System/6000 Model: 530H
C Compiler: xlc Version: 1 Release: 2
PCTS: 151-1 Version: 1.1 - 01/22/92
APTL: 0342 Mindcraft, Inc. Date Issued: 02/25/92

Reference File #: IBM1344
Product Supplier: International Business Machines Inc.
Product Tested: AIX Version: 3 Release: 1
System Supplier: International Business Machines Inc.
System Hardware: RISC System/6000 Model: 320
C Compiler: xlc Version: 3 Release: 1
PCTS: 151-1 Version: 1.1 - 04/26/91
APTL: 0342 Mindcraft, Inc. Date Issued: 05/24/91

Reference File #: IBM2592
Product Supplier: International Business Machines Inc.
Product Tested: AIX Version: 3 Release: 1
System Supplier: International Business Machines Inc.
System Hardware: RISC System/6000 Model: 530
C Compiler: xlc Version: 3 Release: 1
PCTS: 151-1 Version: 1.1 - 04/26/91
APTL: 0342 Mindcraft, Inc. Date Issued: 05/24/91

NIST POSIX VALIDATED PRODUCTS, *Continued*

Reference File #: IBM3697
Product Supplier: International Business Machines Inc.
Product Tested: AIX Version 3 for RISC System/6000 Version: 3 Release: 2
System Supplier: International Business Machines Inc.
System Hardware: RISC System/6000 Model: 320
C Compiler: xlc Version: 1 Release: 2
PCTS: 151-1 Version: 1.1 - 01/22/92
APTL: 0342 Mindcraft, Inc. Date Issued: 02/25/92

Reference File #: INT5154
Product Supplier: Interactive Systems Corp.
Product Tested: Interactive UNIX Operating System Version: 3.0 Release: 3.2
System Supplier: Compaq Computer Corporation
System Hardware: Compaq Model: System Pro
C Compiler: Interactive UNIX Software Development System Version: 3.0
PCTS: 151-1 Version: 1.1 - 09/11/91
APTL: 0345 UniSoft Corporation Date Issued: 10/16/91

Reference File #: SCO5199
Product Supplier: Santa Cruz Operation Inc.
Product Tested: SCO UNIX System V/386 Version: 3.2
System Supplier: Zenith Data Systems
System Hardware: Zenith Data Systems Supersport Laptop Model: Supersport SX
C Compiler: Microsoft C Version: 5.1
PCTS: 151-1 Version: 1.1 - 07/01/91
APTL: 0343 DataFocus Incorporated Date Issued: 09/17/91

Reference File #: SCO6748
Product Supplier: Santa Cruz Operation Inc.
Product Tested: SCO UNIX System V/386 Version: 3.2 Release: 2
System Supplier: Data General Corporation
System Hardware: Walkabout/SX Model: G2763
C Compiler: Microsoft C Optimizing Compiler Version: 5.1
PCTS: 151-1 Version: 1.1 - 07/01/91
APTL: 0342 Mindcraft, Inc. Date Issued: 09/10/91

Reference File #: SCO9875
Product Supplier: Santa Cruz Operation Inc.
Product Tested: SCO UNIX System V/386 Version: 3.2
System Supplier: UNISYS Corporation
System Hardware: PW^2 Advantage 3000 Series Model: 3256
C Compiler: Microsoft C Version: 5.1
PCTS: 151-1 Version: 1.1 - 09/11/91
APTL: 0343 DataFocus Incorporated Date Issued: 11/01/91

Reference File #: SEC8754
Product Supplier: Sequent Computer Systems Inc.
Product Tested: DYNIX/ptx Operating System Version: 1.3.0
System Supplier: Sequent Computer Systems Inc.
System Hardware: Symmetry Series II Model: S27
C Compiler: C Tools Version: 1.12p
PCTS: 151-1 Version: 1.1 - 09/11/91
APTL: 0345 UniSoft Corporation Date Issued: 12/09/91

NIST POSIX VALIDATED PRODUCTS, *Continued*

Reference File #: SUN6635
Product Supplier: SunSoft, Inc.
Product Tested: Solaris Version: 1.0.1 Release: PC
System Supplier: Sun Microsystems Computer Corporation, Inc.
System Hardware: SPARCserver 690 Model: 140
C Compiler: Solaris C Compiler Version: 1.0.1 Release: December 4, 1991
PCTS: 151-1 Version: 1.1 - 01/22/92
APTL: 0342 Mindcraft, Inc. Date Issued: 02/19/92

Reference File #: SUN9763
Product Supplier: SunSoft, Inc.
Product Tested: Solaris Version: 1.0.1 Release: PC
System Supplier: Sun Microsystems Computer Corporation, Inc.
System Hardware: SPARCstation 2 Model: GX
C Compiler: Solaris C Compiler Version: 1.0.1 Release: December 4, 1991
PCTS: 151-1 Version: 1.1 - 01/22/92
APTL: 0342 Mindcraft, Inc. Date Issued: 02/19/92

Reference File #: UNI9080
Product Supplier: UNISYS Corporation
Product Tested: CTOS II Version: 3 Release: 3
System Supplier: UNISYS Corporation
System Hardware: UNISYS B-Series Model: NGEN
C Compiler: Microsoft C Version: 6.0
PCTS: 151-1 Version: 1.1 - 07/01/91
APTL: 0343 DataFocus Incorporated Date Issued: 09/17/91

Reference File #: USL3610
Product Supplier: UNIX System Laboratories, Inc.
Product Tested: UNIX® System V Release 4 for the Intel386™ Architecture Version: 4 Release: July 1991
System Supplier: AT&T
System Hardware: AT&T 6386/25 WGS Model: CPU 311 PC3B
C Compiler: Standard C Development Environment Version: Issue 5
PCTS: 151-1 Version: 1.1 - 09/11/91
APTL: 0342 Mindcraft, Inc. Date Issued: 12/12/91

For further information on the NIST/CSL POSIX validation program contact James A. Hall, Computer Systems Laboratory, B266 Technology Bldg., NIST, Gaithersburg, MD 20899. Telephone: 301-975-3273, fax: 301-590-0932, e-mail: hall@swe.ncsl.nist.gov.

8. COMPUTER SECURITY TESTING

8.1 Cryptographic Standards

The lists in Sections 8.6, 8.7 and 8.8 provide technical information about products that have been validated as conforming to the following computer security FIPS:

a. Data Encryption Standard (DES), FIPS PUB 46-1,

b. Message Authentication Code (MAC), FIPS PUB 113, and

c. Key Management Using ANSI X9.17, FIPS PUB XX (pending).

8.2 Data Encryption Validation Tests

FIPS PUB 46-1 specifies a cryptographic algorithm that converts plaintext to ciphertext using a 56-bit key. Testing procedures for the validation of devices as conforming to FIPS PUB 46-1 are described in the NBS Special Publication 500-20, Validating the Correctness of Hardware Implementations of the NBS Data Encryption Standard. The validation of a device is performed by running the Monte Carlo test described in the publication. The Monte-Carlo test consists of eight million encryptions and four million decryptions, with two encryptions and one decryption making up a single test. The test is designed to use the Electronic Codebook Mode (ECB) of DES. Although the actual test described in NBS Special Publication 500-20 is the same test used to validate devices today, the procedures for administering the test have changed. Currently, the test is performed by the vendor using initial values supplied by NIST. The vendor uses the supplied information to run the Monte-Carlo test and sends the results to NIST.

8.3 Message Authentication Code (MAC) Validation System

FIPS PUB 113 specifies a Data Encryption Algorithm which may be used to detect unauthorized intentional and accidental modifications to data. This process is known as data authentication. The algorithm is based on DES and is used to authenticate an entire binary message. FIPS PUB 113 is compatible with ANSI X9.9 which provides methods for authenticating an entire binary message as well as all or parts of a message which are in a coded character format. Procedures for the validation of products which implement FIPS PUB 113 and ANSI X9.9 are described in NBS Special Publication 500-156, Message Authentication Code (MAC) Validation System: Requirements and Procedures.

8.4 Key Management Validation System (KMVS)

FIPS PUB XX adopts ANSI X9.17 for Federal Government use. ANSI X9.17, Financial Institution Key Management (Wholesale), provides procedures and protocols for the secure generation, distribution, storage, entry, use and destruction of symmetric cryptographic keying material (e.g., DES). It provides key management solutions for a variety of operational environments, and as such, ANSI X9.17 contains a number of options. FIPS PUB XX specifies a particular set of options whenever keying material is distributed using the protocols of ANSI X9.17. Procedures for the validation of products which conform to a subset of the options selected in FIPS PUB XX are described in the Key Management Validation System: Point-to-Point Validation System document which is available from the Manager of the Security Group (see Section 8.5).

8.5 General

8.5.1 Request for Validation.

To validate a product, a vendor should send a formal request for validation which includes a clear indication of the product to be tested. The request must also include the name, address, and telephone number of the person within the vendor's organization who will be responsible for the validation testing. The request should be sent to:

Manager, Security Technology Group
Computer Security Division
National Computer Systems Laboratory
Building 225, Room A216
National Institute of Standards and Technology
Gaithersburg, MD 20899
Telephone (301) 975-2920

8.5.2 Information about Validated Products.

It should be noted that the purpose of the following lists (see Sections 8.6, 8.7 and 8.8) is to provide technical information about products that have been validated as conforming to the FIPS Standards listed in Section 8.1. NIST has made every attempt to provide complete and accurate information about the products described in the following lists. However, due to the possibility of changes made within individual companies, NIST cannot guarantee that this document reflects the current status of each product.

8.5.3 Validation Documentation.

Copies of the above FIPS and Special Publications are for sale by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161. The KMVS validation requirements document discussed in Section 8.4 can be obtained by contacting the Manager of the Security Technology Group at the above address.

8.6 DES Validated Devices

NOTE: The purpose of this document is to provide technical information about devices that have been validated as conforming to Federal Information Processing Standard Publication 46-1, Data Encryption Standard. The National Institute of Standards and Technology (NIST) has made every attempt to provide complete and accurate information about the devices described in this document. However, due to the possibility of changes made within individual companies, NIST cannot guarantee that this document reflects the current status of each product.

MANUFACTURER ADDRESS	PRODUCT	VALIDATION DATE	DESCRIPTION
ADT Security Systems 2560 Huntington Avenue Fourth Floor Alexandria, VA 22303 Hal Marriott (703) 960-8548	ADT Universal Communicator	10/17/90	Chip is an on board component for products in the High Security Intrusion Detection System. System has integrated key management capabilities.
Advanced Micro Devices, Inc. 4115 Freiderich Lane Mail Stop 135 Austin, TX 78744 Patrick Soheili (408) 749-2161	AmZ8068	1/28/81	One 40-pin DIP package; n-channel Si-gate technology; ECB, CBC and 8-bit CFB modes; separate ports for key input, clear data and enciphered data; concurrent input, output and ciphering activities; external DMA control; interfaces with AmZ8000 CPU bus directly, and with the 2900, 8080 8085 and 8048 families with minimum throughput greater than 1 Mbytes per second; greater than 1 Mbytes per second.
	AM 9568	2/28/84	N-channel silicon gate LSI product containing the circuitry necessary to encrypt and decrypt data; can be used in terminals dedicated controllers, communication concentrators, and peripheral task processors in general processor systems; can be used in CF, ECB, or CBC operating modes; separate ports for key input, clear data, and enciphered data enhanced security; interface directly to the IAPX86, 88 bus; interfaces with 2900 and 8051 families with minimal external logic.
American Telephone and Telegraph Company (AT&T) 6612 E. 75th Street P.O. Box 1008 Indianapolis, IN 46206 Ken Zempol (908) 658-6870	AT&T Smart Card Version 2.11/DES	5/3/91	Card is part of a smart card based Computer Security System (CSS). The card is carried by an authorized user and permits the user to gain access to host computer systems that are protected by the CSS.
	AT&T Smart Card Version 3.0/DES (5E1)	7/19/91	This version of the AT&T Smart Card is designed to closely follow developments in the international standards arena in areas of card communication protocols, commands and file structures. It is a general purpose smart card that supports multiple applications and uses the DES as a basic part of its operating system.
Arkansas Systems Inc. 8901 Kanis Road Little Rock, AR 72205-6498 David H. Bishop (501) 227-8471	DES-MATE	7/6/89	Provides data encryption for messages sent and received on-line between and ATM/EFT Network switch processor and an IBM host participant in that network. DES key management is automatic and under system control.
AT&T Whippany Road Whippany, N.J. 07981 William Oeschger (201) 898-1198	AT&T T7000A Digital Encryption Processor	4/22/86	Manufactured using CMOS technology; 40-pin DIP; encryption modes include ECB, CBC, CFB, and OFB; throughput 1.882 Mbytes/second on-chip RAM and ROM program memory.

DES Validated Devices, *Continued*

MANUFACTURER ADDRESS	PRODUCT	VALIDATION DATE	DESCRIPTION
AT&T Bell Laboratories 25 Lindsley Drive Room 2B-309 Morristown, N.J. 07960 William Oeschger (201) 898-1198	DEP229ER (WE229ER)	9/6/83	3.5 micron NMOS technology; 40-pin DIP; encryption modes - ECB, CBC, OFB, CFB1, CFB8, CFB64; Throughput rate of 117K ciphering operation/second.
Collins Telecommunications Collins Defense Communications 350 Collins Road, NE Mail Stop 120-105 Cedar Rapids, Iowa 52498	765-5914-001	10/15/77	pMOS chip with 40 usec algorithm execution time; chip has approximately a 50 nsec state change; can perform I/O functions while the chip is in operation; part of network stand-alone encryptor.
Jim Perkins (319) 395-5773	Voice Privacy Device VP430	10/6/81	Imbedded encryption device for commercial hand held communications devices.
Computer Elektronik Infosys of America, Inc. 512-A Herndon Parkway Herndon, VA 22070 A. Mark Brown (703) 435-3800	SuperCrypt	7/24/91	Chip designed for high speed (12 Megabytes/sec data rates) encryption and decryption. ECB, CBC, CFB and OFB modes of DES supported as well as MAC generation. Available as a 120 Pin Flat Pack.
The Exchange 15395 SE 30th Place Bellevue, WA 98007 Patricia Lenti-Crane (206)644-7000	EXCRYPT DEB-64-KM (originally EXCLUDE DEB-64-KM)	1/26/89	Encrypts and decrypts data; generates random keys; supports up to six security processor boards that can be run in parallel to enhance throughput; has storage capacity for up to 4000 DES keys; developed for secure financial transactions.
Front Line Software P.O. Box 217 Lowell, MA 01853 William Graham (617) 452-3352	726-8064 PROM Device	12/1/86	4 K EPROM to be used with Intel IPAX family of microprocessors including all models of the IBM PC family; all modes of DES supported.
GEMPLUS CARD INTERNATIONAL 6290 Montrose Road Rockville, MD 20852 Gilles Lisimaque (301) 770-1558	MCOS16K EEPROM/DES	3/18/91	A multi-application smart card which complies with the ISO standard 7816 (parts 1,2, and 3) for Integrated Circuit cards with contacts.
General Electric Company Mountain View Road Lynchburg, VA 24502 Jim Elder (804) 948-6187	Part Number 19B801375	6/28/85	The GE DES IC is a microprocessor controlled, low speed asynchronous CMOS IC using DES. Intended to provide secure voice in commercial grade mobile radio applications.
IBM Corporation Federal Systems Division WK4/988 P.O. Box 100 Kingston, NY 12401 Robert Elander (914) 385-6692	4402182	11/1/77	This card used in terminal equipment; the chip uses technology with PLA control to implement CBC;
	P/N 8270094 using DES Chip P/N 5898057 (originally 8269206)	8/25/78	This card is used in 3845 and 3846 equipment for 8-bit CFB.
	Two TTL cards - 8632242	9/21/79	Will operate at least at the 1.5 Mbytes 360 channel and 8679176 rate; card set is used in the 3848 cryptographic unit; uses "Emerald-5" technology.

DES Validated Devices, *Continued*

MANUFACTURER ADDRESS	PRODUCT	VALIDATION DATE	DESCRIPTION
IBM Corporation 1001 W.T. Harris Blvd. West Charlotte, NC 28257 William Rohland (704) 594-8250	4745 Security Interface Unit and the Personal Security Card	10/10/90	Devices are used in a transaction security system to protect the privacy and integrity of data using a common cryptographic interface. The security interface unit communicates with the Personal Security Card and the cryptographic adaptor, if present. The Personal Security Card is an integrated-circuit chip card that contains a single chip security processor.
Intel 1900 Praire City Road Folsom, CA 95630 Joe Dragony (916) 351-5250	8294	1/3/78	Algorithm is microcode which is burned into a 1 Kbyte ROM on a 5 volt, 40-pin chip driven by a 8042 microprocessor.
	8294A	6/20/82	Same as the 8294 except for a maximum data transfer rate of 400 bytes per second.
John E. Holt & Associates 2714 Key Boulevard Arlington, VA 22201 John Holt (703) 524-2923	Krypton Firmware	2/12/86	ROM chips for the standard IBM PC family include eight 3722 chips, four 2764 chips and one 27256 chip; 1024-bit CBC chaining; encryption speed dependent on clock of PC; ROM can plug directly into ROM slot.
Lexicon ICOT Corporation 3801 Zanker Road P.O. Box 5143 San Jose, CA 95150-5143 Bob Lynch (408) 433-3300	LEX-POS (Model 600)	11/28/84	A Personal Identification Number (PIN) entry device; used in conjunction with financial transaction devices, 16 key keyboard, 20 character display, RS-232 compatible, Lexicon sold LEX-POS to ICOT Corporation.
LSI Logic/Dataco AS Smedeholm 12-14 DK-2730 Herlev Denmark Jens Kjelsbak 45 44 53 01 00	Dataco L5A4043 2030025402	1/12/90	Custom DES IC was manufacturer by LSI Logic for Dataco. The DES chip is designed for optional use in ScaNet local area network products.
Matsushita Electronic Components Co. High Frequency Products Division One Pansonic Way Secaucus, NJ 07094 Dursun Sakarya (201) 348-7767	EBC 1642 IC Card	3/13/91	Card is designed to be a high security external storage media housing an 8 bit CPU and 64 Kbit EEPROM.
Micro Card Technologies, Inc. 14070 Proton Road Dallas, TX 75244 Jeff Lang (214) 788-4055	Micro Card TB100 Integrated Circuit Card	9/19/90	A multi-application integrated circuit card which can simultaneously support several application data files. Ciphering and deciphering functions may be used to encrypt or decrypt external messages using DES.
Morse Security Group, Inc. 12960 Bradley Avenue Sylmar, CA 91342-0128 Nalin Chheda (800) 423-5669 (818) 367-5951	TRAP 5200 System	4/17/90	Touch response alarm processor system, including a receiver processor located in a data gathering center and a series of transponders located at remote locations, contains DES to produce encrypted data that flows along a communication path.
Motorola Microprocessor Products Division 6501 William Cannon Drive West Austin, TX 78735-8598 Don Ponder (512) 440-2956	MC6859 (originally MGD68NE)	2/11/80	Si-gate depletion mode, nMOS 24-pin DIP using single 5 volt power supply; Implements ECB and CFB.

DES Validated Devices, *Continued*

MANUFACTURER ADDRESS	PRODUCT	VALIDATION DATE	DESCRIPTION
Newbridge Microsystems 603 March Road Kanata, Ontario Canada K2K 2M5 Tony Rosati (613) 592-0714	CA20C03A	4/10/91	A high performance WD20C03A compatible DES Data encryption processor with data transfer rates up to 4 Mbytes per second. Supports ECB and CBC;PLCC and PDIP packaging available.
Newnet S.A. Alsina 430 Buenos Aires 1087 Argentina Daniel Ramos 54 1 334 9732	Data Security Device (DSD 9612)	7/2/91	This device is based on an eight bit INTEL microprocessor with 8 Kbytes of EPROM. Transfer data at speeds of 1200 to 9600 bps and communicates with other devices via EIA RS-232-C ports.
Nixdorf Computer Corporation 168 Middlesex Turnpike Burlington, MA 01803 Kevin Madden (617) 890-3600	VEM Module	1/7/80	The plug-in module Is used with the Nixdorf 8864 CPU for encrypting data transmission blocks and file protection; may be used in terminal applications in the financial community; uses TTL.
Racal-Milgo P.O. Box 407044 Ft. Lauderdale, FL 33340-7044 Richard Abbruscato (305) 476-6800	Datacryptor	1/7/80	Stand alone equipment with public key management remote distribution of master keys.
Rothenbuhler Engineering P.O. Box 708 2191 Rhodes Road Sedro Wolley, WA 98284-0708 Andrew Benson (206) 856-0836	CLS Series 5200 Encryption Module	3/19/91	The CLS Series 5200 Encryption Module is used In a system which communicates 8 channels of electronic security information between a client and a central monitoring facility.
Secur-Data Systems, Inc. Omega Center 7340 Executive Way, Suite R Frederick, MD 21701 Ronald Baum (301) 698-9955	DESPLEX	2/2/89	Used in a CF configuration as part of a firmware operating system for processing and transmission of alarm sensor data as well as receiving and annuciating dat at an alarm monitoring facility.
Texas Instruments, Inc. P.O. Box 1443, M/S 736 Houston, TX 77001 Mike Polen (713) 274-3635	TMS 99541	2/28/82	Preprogrammed TMS7020 8-bit single chip microprocessor; 40-pin DIP plastic package I/O pins are TTL compatible; master and active key registers;
UNIVAC P.O. Box 3942 St. Paul, MN 55165 Jim Nelson (612) 631-6728	End-End/Mass Storage Encryptor	1/29/80	Prototype device for testing purposes only;
VLSI Technology, Inc. 8375 S. River Parkway Tempe, AZ 85284 R. Slusarczyk (602) 752-8574	VM007 - Data Encryption Processor	1/6/92	The VM007 Data Encryption Processor is a programmable integrated circuit that provides a complete cryptographic system on a single chip. It contains a hardware implementation of the DES, RISC-based sequencer, data storage registers, and ROM-based microprogram. It is designed to provide very high data and key processing rates (up to 190 Megabits per second), flexible I/O inter-facing, advanced security features and supports all DES modes of operation.

DES Validated Devices, *Continued*

MANUFACTURER ADDRESS	PRODUCT	VALIDATION DATE	DESCRIPTION
Wells Fargo Security Products A Unit of Baker Protective Services 1010 North Glebe Road, Suite 680 Arlington, VA 22201 William Martin (703) 247-4250	WP PN 5286/WP PN 5287	5/26/89	The monitor panels are Intended for use in a monitoring station of a proprietary intrusion detection alarm system.
Western Digital Corporation 2445 McCabe Way Irvine, CA 92714 Product Marketing Manager for Security Devices (714) 474-2033 X7853	WD-2001/WD2002	8/9/79	Uses si-gate nMOS, TTL compatible; ECB speeds of up to 40 Kbytes/second, 161 Kbytes/second and 242 Kbytes/second.
	WD20C03 DES Device	2/19/87	Uses si-gate CMOS, TTL compatible; ECB and CBC, speeds of up to 403 Kbytes/second, 645 Kbytes/second and 807 Kbytes/second in ECB.

8.7 Message Authentication Code (MAC) Implementations

Vendor/Contact	Implementation	Validated Options
1. ACS Communications Systems Inc. 480 Spring Park Place Suite 900 Herndon, VA 22070 Don Cole, (703) 471-0892	Personal Computer Security Module, PCSM-T May 16, 1986	BINARY OPTION (FIPS 113)
2. Federal Reserve Bank of Cleveland P.O.B. 6387 Cleveland, Ohio 44101 Dave Rich, (216) 579-2221	Jones Futurex PC Encryption Board FRS PC MAC Processor October 28, 1986	BINARY OPTION (FIPS 113) CODED CHARACTERS; ENTIRE MESSAGE; NO EDITING CODED CHARACTERS; ENTIRE MESSAGE; EDITING
3. Shannon Systems, Inc. Mountain View, CA Out of Business	Remote Crypto Facility Software Version 3.0 January 16, 1987	BINARY OPTION (FIPS 113)
4. Codercard, Inc. Rights transferred to LITRONICS Information Systems on Sept. 12, 1990 - see entry 23. LITRONICS Information Systems 2950 Redhill Avenue Costa Mesa, CA 92626 Bob Gray, (714) 557-3444	Personal Computer Security Adaptor, CPS-300 Argus, Version 1 Software February 26, 1987	BINARY OPTION (FIPS 113) CODED CHARACTERS, ENTIRE MESSAGE, NO EDITING CODED CHARACTERS, ENTIRE MESSAGE, EDITING CODED CHARACTERS, EXTRACTED MESSAGE ELEMENTS, NO EDITING CODED CHARACTERS, EXTRACTED MESSAGE ELEMENTS, EDITING
5. Jones Futurex, Inc. 10933 Trade Center Drive Rancho Cordova, CA 95670 Don Thompson, (916) 635-3972	MAC-310 Message Authenticator February 27, 1987	BINARY OPTION (FIPS 113)
6. Infomax Securities 6974 Sandpiper Place Carlsbad, CA 92009 David Howard, (619) 931-8787	Protecom Crypto Processor Protecom Device Driver & Utilities, Version 0.5 March 27, 1987	BINARY OPTION (FIPS 113)

Message Authentication Code (MAC) Implementations, *Continued*

Vendor/Contact	Implementation	Validated Options
7. Inter-Quest, Inc. 16508 E. Laser Drive Fountain Hills, AZ 85268 Charles Redding, (602) 948-2560	PORT-OF-ENTRY Computer Security System Vers. 1.1 (Software) May 8, 1987	BINARY OPTION (FIPS 113)
8. Infomax Securities 6974 Sandpiper Place Carlsbad, CA 92009 David Howard, (619) 931-8787	Protecom Crypto Processor Protecom Device Driver & Utilities, Version 0.6 May 11, 1987	BINARY OPTION (FIPS 113) CODED CHARACTERS; ENTIRE MESSAGE; NO EDITING CODED CHARACTERS; ENTIRE MESSAGE; EDITING CODED CHARACTERS; EXTRACTED MESSAGE ELEMENTS; NO EDITING CODED CHARACTERS; EXTRACTED MESSAGE ELEMENTS; EDITING
9. Digitech Telecommunications, Inc. 342 Madison Avenue Suite 2010 New York, NY 10017 James J. McKeeff, (212) 557-7230	Softnet Software, Version 1 June 29, 1987	BINARY OPTION (FIPS 113)
10. Sytek, Inc. Rights transferred to AeT Research, Inc. on January 29, 1988 - see entry 17 AeT Research 675 North First Street Suite 800 San Jose, CA 95112 Linden Feldman, (408) 275-0820	MACbox June 30, 1987	BINARY OPTION (FIPS 113) CODED CHARACTERS; ENTIRE MESSAGE; NO EDITING CODED CHARACTERS; ENTIRE MESSAGE; EDITING CODED CHARACTERS; EXTRACTED MESSAGE ELEMENTS; NO EDITING CODED CHARACTERS; EXTRACTED MESSAGE ELEMENTS; EDITING

Message Authentication Code (MAC) Implementations, *Continued*

Vendor/Contact	Implementation	Validated Options
11. Inter-Quest, Inc. 16508 East Laser Drive Fountain Hills, AZ 85268 Charles Redding, (602) 948-2560	PORT-OF-ENTRY Computer Security System Vers 1.2 (Software) August 17, 1987	BINARY OPTION (FIPS 113) CODED CHARACTERS; ENTIRE MESSAGE; NO EDITING CODED CHARACTERS; ENTIRE MESSAGE; EDITING CODED CHARACTERS; EXTRACTED MESSAGE ELEMENTS; NO EDITING CODED CHARACTERS; EXTRACTED MESSAGE ELEMENTS; EDITING
12. Racal-Guardata Limited Richmond Court 309 Fleet Road Fleet, Hampshire GU13 8BU England Paul Halliden, (252) 622144, England	PC Security Module, RGL 600 RGL 600 Host PC C Driver Software, Version: V1.01 November 20, 1987	BINARY OPTION (FIPS 113)
13. The Chase Manhattan Bank, N.A. 1 Seaport Plaza 11th Floor New York, New York 10038 Bob Martian, (212) 797-4038	C-FIMAS 16 Software, Version 1.0 December 8, 1987	BINARY OPTION (FIPS 113) CODED CHARACTERS; ENTIRE MESSAGE; NO EDITING CODED CHARACTERS; ENTIRE MESSAGE; EDITING CODED CHARACTERS; EXTRACTED MESSAGE ELEMENTS; NO EDITING CODED CHARACTERS; EXTRACTED MESSAGE ELEMENTS; EDITING
14. Atalla Corporation 2304 Zanker Road San Jose, CA 95131 Dale Hopkins, (408) 435-8850	Personal Computer Module, CPCM CPCM.HEX Software, Version OA 13-2043-01 January 11, 1988	BINARY OPTION (FIPS 113)
15. GN Telematic, Inc. 46 Manning Road Billerica, MA 01821 Poul Hebsgaard, (617) 667-8644	safeMatic 2000, KB76-17527 January 12, 1988	BINARY OPTION (FIPS 113)

Message Authentication Code (MAC) Implementations, *Continued*

Vendor/Contact	Implementation	Validated Options
16. GN Telematic, Inc. 46 Manning Road Billerica, MA 01821 Poul Hebsgaard, (617) 667-8644	safeMatic 2000, KB76-17527 Coded Character Set Processing Software, Model KB77-17012, Version A February 3, 1988	BINARY OPTION (FIPS 113) CODED CHARACTERS; ENTIRE MESSAGE; NO EDITING CODED CHARACTERS; ENTIRE MESSAGE; EDITING CODED CHARACTERS; EXTRACTED MESSAGE ELEMENTS; NO EDITING CODED CHARACTERS; EXTRACTED MESSAGE ELEMENTS; EDITING
17. AeT Research 675 North First Street Suite 800 San Jose, CA 95112 Originally validated on June 30, 1987 as a Sytek, Inc. device - see entry 10. Linden Feldman, (408) 275-0820	MACbox August 8, 1988	BINARY OPTION (FIPS 113) CODED CHARACTERS; ENTIRE MESSAGE; NO EDITING CODED CHARACTERS; ENTIRE MESSAGE; EDITING CODED CHARACTERS; EXTRACTED MESSAGE ELEMENTS; NO EDITING CODED CHARACTERS; EXTRACTED MESSAGE ELEMENTS; EDITING
18. Atalla Corporation 2304 Zanker Road San Jose, CA 95131 Dale Hopkins, (408) 435-8850	Personal Computer Module, MN-40-249 CPCM.HEX Software, Version OE 13-2043-00 September 26, 1988	BINARY OPTION (FIPS 113)
19. Cypher Communications Technology, Inc. 4520 East-West Highway Suite 550 Bethesda, MD 20814 Angel Bailey, (301) 652-6790	CYCOM SCI AX3 5.01, Version 10084002 February 2, 1989	BINARY OPTION (FIPS 113)

Message Authentication Code (MAC) Implementations, *Continued*

Vendor/Contact	Implementation	Validated Options
20. Dial-Guard 55 Koch Road/PO Box 7045 Corte Madera, CA 94925 Shun-Hwa Chang or Trone Miller, (415) 927-2232	Dial-Guard Remote Authenticator 01-103, Version 2.0 Rev. 0 March 6, 1989	BINARY OPTION (FIPS 113)
21. Okiok Data 3945 St. Martin Laval, Quebec, Canada H7T 1B7 Claude Vigeant, (514) 681-1681	RAC/M FAS-PACK, Version 1.0 April 24, 1989	BINARY OPTION (FIPS 113) CODED CHARACTERS; ENTIRE MESSAGE; NO EDITING CODED CHARACTERS; ENTIRE MESSAGE; EDITING CODED CHARACTERS; EXTRACTED MESSAGE ELEMENTS; NO EDITING CODED CHARACTERS; EXTRACTED MESSAGE ELEMENTS; EDITING
22. Racal-Guardata, Inc 480 Spring Park Place Suite 900 Herndon, VA 22070 Brian Bucholz, (703) 471-0892	X9 Crypto Server June 1, 1990	BINARY OPTION (FIPS 113) CODED CHARACTERS; ENTIRE MESSAGE; NO EDITING CODED CHARACTERS; ENTIRE MESSAGE; EDITING CODED CHARACTERS; EXTRACTED MESSAGE ELEMENTS; NO EDITING CODED CHARACTERS; EXTRACTED MESSAGE ELEMENTS; EDITING
23. LITRONIC Information Systems 2950 Redhill Avenue Costa Mesa, CA 92626 Rights transferred on September 12, 1990 Bob Gray, (714) 545-6649 James Prohaska, (703) 960-8068	Personal Computer Security Adapter Argus, Version 1 Software** Originally validated by Codercard, Inc. on February 26, 1987 - see entry 4.	BINARY OPTION (FIPS 113) CODED CHARACTERS; ENTIRE MESSAGE; NO EDITING CODED CHARACTERS; ENTIRE MESSAGE; EDITING CODED CHARACTERS; EXTRACTED MESSAGE ELEMENTS; NO EDITING CODED CHARACTERS; EXTRACTED MESSAGE ELEMENTS; EDITING

Message Authentication Code (MAC) Implementations, *Continued*

Vendor/Contact	Implementation	Validated Options
24. IBM Corporation Dept. 65K/B204-3 1001 W.T. Harris Blvd. Charlotte, NC 28257 Roger Evans, (704) 594-7060	4755 Cryptographic Adapter October 15, 1990	BINARY OPTION (FIPS 113)
25. IBM Corporation Dept. 65K/B204-3 1001 W.T. Harris Blvd. Charlotte, NC 28257 Roger Evans, (704) 594-7060	4754 Security Interface Unit October 15, 1990	BINARY OPTION (FIPS 113)
26. IBM Corporation Dept. 65K/B204-3 1001 W.T. Harris Blvd. Charlotte, NC 28257 Roger Evans, (704) 594-7060	IBM Personal Security Card October 15, 1990	BINARY OPTION (FIPS 113)
27. Cypher Communications Technology, Inc. 15200 Shady Grove Rd. Suite 350 Rockville, MD 20850 Angel Bailey, (301) 590-9314	CYCOM SCI/SL 96 AX5 5.03, Version 10084012 December 19, 1990	BINARY OPTION (FIPS 113)
28. Cypher Communications Technology, Inc. 15200 Shady Grove Rd. Suite 350 Rockville, MD 20850 Angel Bailey, (301) 590-9314	CYCOM SCI 192 AX7 5.05, Version 10084020 January 10, 1991	BINARY OPTION (FIPS 113)
29. Digital Equipment Corporation Digital Drive - MK01-2/B06 Merrimack, NH 03054 Steve Lawrence, (603) 884-3445	PIN Pad 201 SMD Model: P003-120-XX March 25, 1991	BINARY OPTION (FIPS 113)

Message Authentication Code (MAC) Implementations, *Continued*

Vendor/Contact	Implementation	Validated Options
30. Information Security Corporation 1141 Lake Cook Road Suite D Deerfield, IL 60015 Michael Markowitz, (708) 405-0500	DES Module used in SpyProof! July 10, 1991	BINARY OPTION (FIPS 113)
31. Digital Signature Validated by Information Security Corporation 1115 N. East Avenue Oak Park, IL 60302 Michael Markowitz, (708) 405-0500	DES Module used in CryptMaster (3.20) and SecretAgent (1.00) July 15, 1991	BINARY OPTION (FIPS 113)
32. The Exchange Systems 15395 SE 30th Place Bellevue, WA 98007-6594 Robert Adamson, (206) 644-7000 X255	PCE-3000 (IBM PS/2 Microchannel) January 8, 1992	BINARY OPTION (FIPS 113) CODED CHARACTERS; ENTIRE MESSAGE; NO EDITING CODED CHARACTERS; ENTIRE MESSAGE; EDITING CODED CHARACTERS; EXTRACTED MESSAGE ELEMENTS; NO EDITING CODED CHARACTERS; EXTRACTED MESSAGE ELEMENTS; EDITING
33. The Exchange Systems 15395 SE 30th Place Bellevue, WA 98007-6594 Robert Adamson, (206) 644-7000 X255	PCE-1000 ISA Adaptor January 9, 1992	BINARY OPTION (FIPS 113) CODED CHARACTERS; ENTIRE MESSAGE; NO EDITING CODED CHARACTERS; ENTIRE MESSAGE; EDITING CODED CHARACTERS; EXTRACTED MESSAGE ELEMENTS; NO EDITING CODED CHARACTERS; EXTRACTED MESSAGE ELEMENTS; EDITING

8.8 Validations for Key Management Using ANSI X9.17

Vendor/Contact	Implementation	Validated Options
1. LITRONICS Information Systems 2950 Redhill Avenue Costa Mesa, CA 92626 (Originally validated by Codercard; rights transferred on September 11, 1990) Bob Gray, (714) 545-6649 James Prohaska, (703) 960-8068	Hardware: Argus-PC, Model: CMS-100 Software: Argus/MACE Software, Version: 1.0 September 23, 1988	No. of communicating pairs: 2 No. of manual (*)KKs per comm. pair: 2 Length of manual and auto. (*)KKs: PAIR Key generation capability: YES Number of auto. distr. (*)KKs shared: UP TO 4 Number of KDs shared: UP TO 8 2 KDs in KSMs: SOMETIMES Send RSI messages: NOT TESTED Receive RSI messages: NOT TESTED Notarization of keys in KSMs: ALWAYS Send odd parity on keys in KSMs: ALWAYS Send IVs in KSMs: SOMETIMES Send encrypted IVs in KSMs: ALWAYS Send EDCs in RSIs and ESMs: ALWAYS Action if EDC received in RSIs and ESMs: NOT APPLICABLE Send EDKs in KSMs: SOMETIMES Action on count error: ADJUST COUNT Send DSMs: YES Receive DSMs: YES IDA in DSM if only one KD can be shared: YES Role assumed: EITHER A OR B Automatic error recovery: NOT TESTED Space & CRLF as field delimiter: NOT TESTED

Vendor/Contact	Implementation	Validated Options
2. TECHNICAL COMMUNICATIONS CORPORATION 100 Domino Drive CONCORD, Massachusetts 01742 John Gill, (617) 862-6035	Hardware: CX5000A Software: Version: 1.0 May 6, 1991	No. of communicating pairs: 1 No. of manual (*)KKs per comm. pair: 2 Length of manual and auto. (*)KKs: PAIR Key generation capability: YES Number of auto. distr. (*)KKs shared: 0 Number of KDs shared: 1 2 KDs in KSMs: NEVER Send RSI messages: NOT TESTED Receive RSI messages: NOT TESTED Notarization of keys in KSMs: ALWAYS Send odd parity on keys in KSMs: ALWAYS Send IVs in KSMs: SOMETIMES Send encrypted IVs in KSMs: ALWAYS Send EDCs in RSIs and ESMs: ALWAYS Action if EDC received in RSIs and ESMs: NOT APPLICABLE Send EDKs in KSMs: NEVER Action on count error: ADJUST COUNT Send DSMs: YES Receive DSMs: YES IDA in DSM if only one KD can be shared: YES Role assumed: EITHER A OR B Automatic error recovery: NOT TESTED Space & CRLF as field delimiter: NOT TESTED

Vendor/Contact	Implementation	Validated Options
3. TECHNICAL COMMUNICATIONS CORPORATION 100 Domino Drive CONCORD, Massachusetts 01742 John Gill, (617) 862-6035	Hardware: CX5000 Software: Version: 2.0 May 15, 1991	No. of communicating pairs: 1 No. of manual (*)KKs per comm. pair: 2 Length of manual and auto. (*)KKs: PAIR Key generation capability: YES Number of auto. distr. (*)KKs shared: 4 Number of KDs shared: 1 2 KDs in KSMs: NEVER Send RSI messages: NOT TESTED Receive RSI messages: NOT TESTED Notarization of keys in KSMs: ALWAYS Send odd parity on keys in KSMs: ALWAYS Send IVs in KSMs: SOMETIMES Send encrypted IVs in KSMs: ALWAYS Send EDCs in RSIs and ESMs: ALWAYS Action if EDC received in RSIs and ESMs: NOT APPLICABLE Send EDKs in KSMs: NEVER Action on count error: ADJUST COUNT Send DSMs: YES Receive DSMs: YES IDA in DSM if only one KD can be shared: YES Role assumed: EITHER A OR B Automatic error recovery: NOT TESTED Space & CRLF as field delimiter: NOT TESTED

Vendor/Contact	Implementation	Validated Options
4. COMMUNICATION DEVICES, INC. 1 Forstmann Court Clifton, NJ 07011 Gene Hartsell, (201) 772-6997	Hardware: RSD/E Software: Version 7.2	No. of communicating pairs: 1 No. of manual (*)KKs per comm. pair: 1 Length of manual and auto. (*)KKs: PAIR Key generation capability: NO Number of auto. distr. (*)KKs shared: 0 Number of KDs shared: 1 2 KDs in KSMs: NEVER Send RSI messages: NOT TESTED Receive RSI messages: NOT TESTED Notarization of keys in KSMs: ALWAYS Send odd parity on keys in KSMs: ALWAYS Send IVs in KSMs: SOMETIMES Send encrypted IVs in KSMs: ALWAYS Send EDCs in RSIs and ESMs: ALWAYS Action if EDC received in RSIs and ESMs: NOT APPLICABLE Send EDKs in KSMs: NEVER Action on count error: ADJUST COUNT Send DSMs: YES Receive DSMs: YES IDA in DSM if only one KD can be shared: YES Role assumed: EITHER A OR B Automatic error recovery: NOT TESTED Space & CRLF as field delimiter: NOT TESTED Number of communicating pairs: 1 Number of manual (*)KKs per comm. pair: 2 Length of manual and

APPENDIX A

FIPS CONFORMANCE TESTING PRODUCTS AND SERVICES

APPENDIX A

FIPS CONFORMANCE TESTING PRODUCTS AND SERVICES

The purpose of this appendix is to provide information about products and services that are available to Federal Agencies for assessing products for conformance to FIPS.

The entries in this list identify the topic, the standard tested, the NIST contact, and the product or service offered. The letters T, S, or C in the Product/Service column indicate a test method, testing service, or certificate/registered report respectively.

TOPIC	STANDARD	CONTACT	PRODUCT/SERVICE
COBOL	FIPS PUB 21-3	Judy Kailey NIST, Bldg. 225, Rm. A266 Gaithersburg, MD 20899 (301) 975-3259	T, S, C
Fortran	FIPS PUB 69-1	Judy Kailey NIST, Bldg. 225, Rm. A266 Gaithersburg, MD 20899 (301) 975-3259	T, S, C
Pascal	FIPS PUB 109	Kathryn Miles NIST, Bldg. 225, Rm. A266 Gaithersburg, MD 20899 (301) 975-3156	T, S, C
C	FIPS PUB 160	Kathryn Miles NIST, Bldg. 225, Rm. A266 Gaithersburg, MD 20899 (301) 975-3156	T, S, C
Ada	FIPS PUB 119	William Dashiell NIST, Bldg. 225, Rm. A266 Gaithersburg, MD 20899 (301) 975-2490	T, S, C
MUMPS	FIPS PUB 125	William Dashiell NIST, Bldg. 225, Rm. A266 Gaithersburg, MD 20899 (301) 975-2490	T, S, C
SQL	FIPS PUB 127-1	Joan Sullivan NIST, Bldg. 225, Rm. A266 Gaithersburg, MD 20899 (301) 975-3258	T, S, C

TOPIC	STANDARD	CONTACT	PRODUCT/SERVICE
GKS	FIPS PUB 120	Susan (Quinn) Sherrick NIST, Bldg. 225, Rm. A266 Gaithersburg, MD 20899 (301) 975-3268	T, S, C
CGM	FIPS PUB 128 MIL-D-28003	Lynne Rosenthal NIST, Bldg. 225, Rm. A266 Gaithersburg, MD 20899 (301) 975-3353	T, S, C
POSIX	FIPS PUB 151-1	Jim Hall NIST, Bldg. 225, Rm. B266 Gaithersburg, MD 20899 (301) 975-3273	T, S, C
Message Authentication	FIPS PUB 113	Miles Smid NIST, Bldg. 225, Rm. A216 Gaithersburg, MD 20899 (301) 975-2938	T, S, C
Key Management Validation	ANSI X9.17	Miles Smid NIST, Bldg. 225, Rm. A216 Gaithersburg, MD 20899 (301) 975-2938	T, S, C
Data Encryption Standard	FIPS PUB 46-1	Miles Smid NIST, Bldg. 225, Rm. A216 Gaithersburg, MD 20899 (301) 975-2938	T, S, C
GOSIP	FIPS PUB 146	Stephen Nightingale NIST, Bldg. 225, Rm 141 Gaithersburg, MD 20899 (301) 975-3616	T, S
1984 X25	CCITT X.25-1984 ISO 7776, ISO 8208 ISO 8882, ISO 9646 FIPS PUB 100-1 FIPS PUB 122(planned)	David Su NIST, Bldg. 223, Rm. B364 Gaithersburg, MD 20899	T
ISDN Data Link Layer	Q921.LAPD ANSI T1.602	David Su NIST, Bldg. 223, Rm. B364 Gaithersburg, MD 20899 (301) 975-6194	T

TOPIC	STANDARD	CONTACT	PRODUCT/SERVICE
ISDN Physical Layer	S/T Interface ANSI T1.605 (S/T Interface) ANSI T1.601 (U Interface)	David Su NIST, Bldg. 223, Rm. B364 Gaithersburg, MD 20899 (301) 975-6194	T (abstract)
ISDN Network Layer	Q931 ANSI T1.607 ANSI T1.608 FIPS PUB (planned)	David Su NIST, Bldg. 223, Rm. B364 Gaithersburg, MD 20899 (301) 975-6194	T
FDDI	ANSI X3T9 FIPS PUB (planned)	David Su NIST, Bldg. 223, Rm. B364 Gaithersburg, MD 20899 (301) 975-6194	T

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8. TYPE OF REPORT AND PERIOD COVERED

9. SPONSORING ORGANIZATION NAME AND COMPLETE ADDRESS (STREET, CITY, STATE, ZIP)

10. SUPPLEMENTARY NOTES

[ ] DOCUMENT DESCRIBES A COMPUTER PROGRAM; SF-185, FIPS SOFTWARE SUMMARY, IS ATTACHED.

11. ABSTRACT (A 200-WORD OR LESS FACTUAL SUMMARY OF MOST SIGNIFICANT INFORMATION. IF DOCUMENT INCLUDES A SIGNIFICANT BIBLIOGRAPHY OR LITERATURE SURVEY, MENTION IT HERE.)

The Validated Products List (VPL) identifies information technology products that have been tested for conformance to Federal Information Processing Standards (FIPS) in accordance with Computer Systems Laboratory (CSL) conformance testing procedures, and have a current validation certificate or registered test report. The VPL includes computer language processors for programming languages Ada, C, COBOL, Fortran, MUMPS, Pascal, and database language SQL; computer graphic implementations for GKS, and CGM; operating system implementations for POSIX; open systems interconnect implementations for GOSIP; and computer security implementations for DES, MAC and Key Management. The testing of products to assure conformance to the FIPS is required by Government agencies in accordance with the FIPS, Federal Information Resources Management Regulation (FIRMR) Parts 201.13 and 201.39, and the associated Federal ADP and Telecommunications Standards Index. The VPL is updated and published quarterly.

12. KEY WORDS (6 TO 12 ENTRIES; ALPHABETICAL ORDER; CAPITALIZE ONLY PROPER NAMES; AND SEPARATE KEY WORDS BY SEMICOLONS)

conformance testing; validation; Ada; C; COBOL; Fortran; Pascal; MUMPS; POSIX; GOSIP; SQL; GKS; CGM; DES; MAC; Key Management; information technology; FIPS

13. AVAILABILITY

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